

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problems Mailbox.**

**Amendments to the Drawings:**

The attached forty-nine (49) sheets of drawings include the changes to Figure 6b as required by the Examiner in the Examiner's Amendment which accompanied the Notice of Allowance. In addition, the attached sheets of drawings include the changes required by the draftsman in Form PTO-948. These attached sheets replace the originally filed sheets of drawings.

Attachment: Replacement Sheets (49)

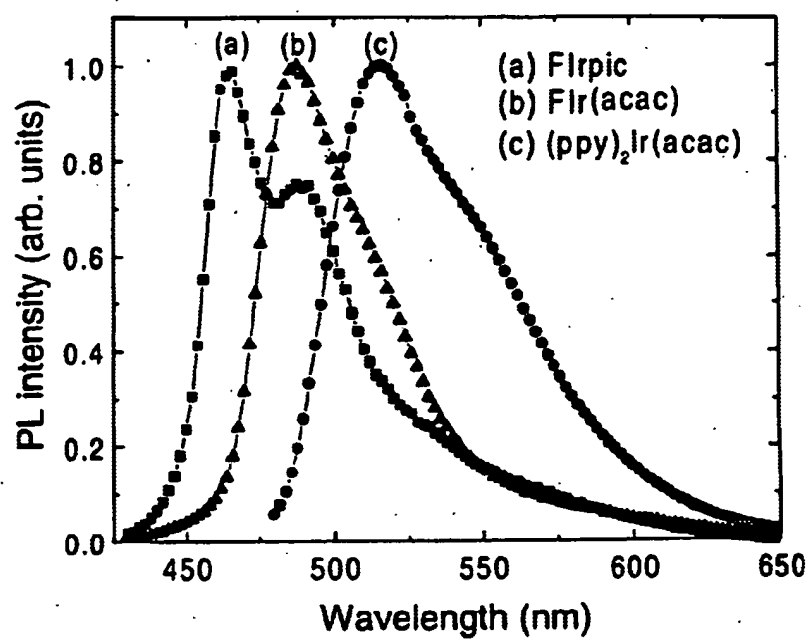
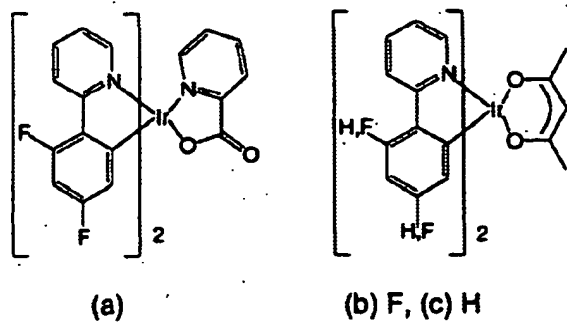


Figure 1a

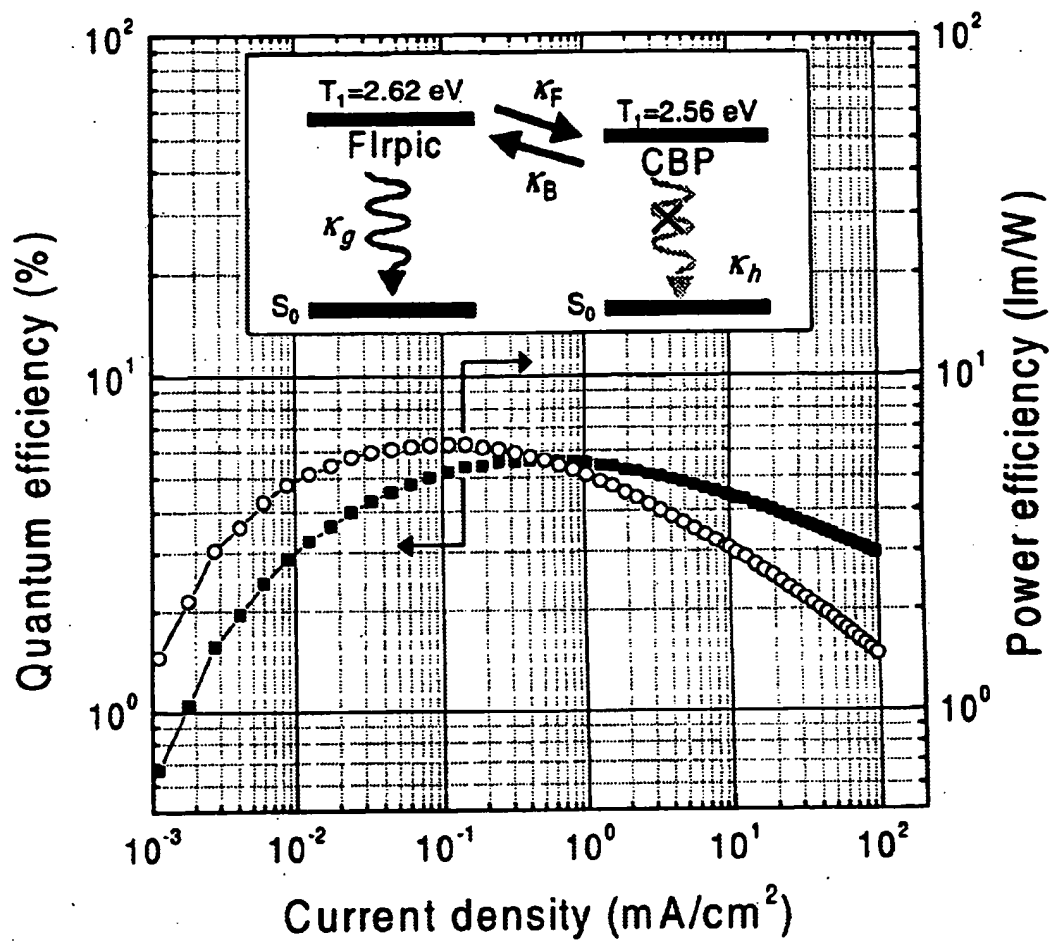


Figure 2

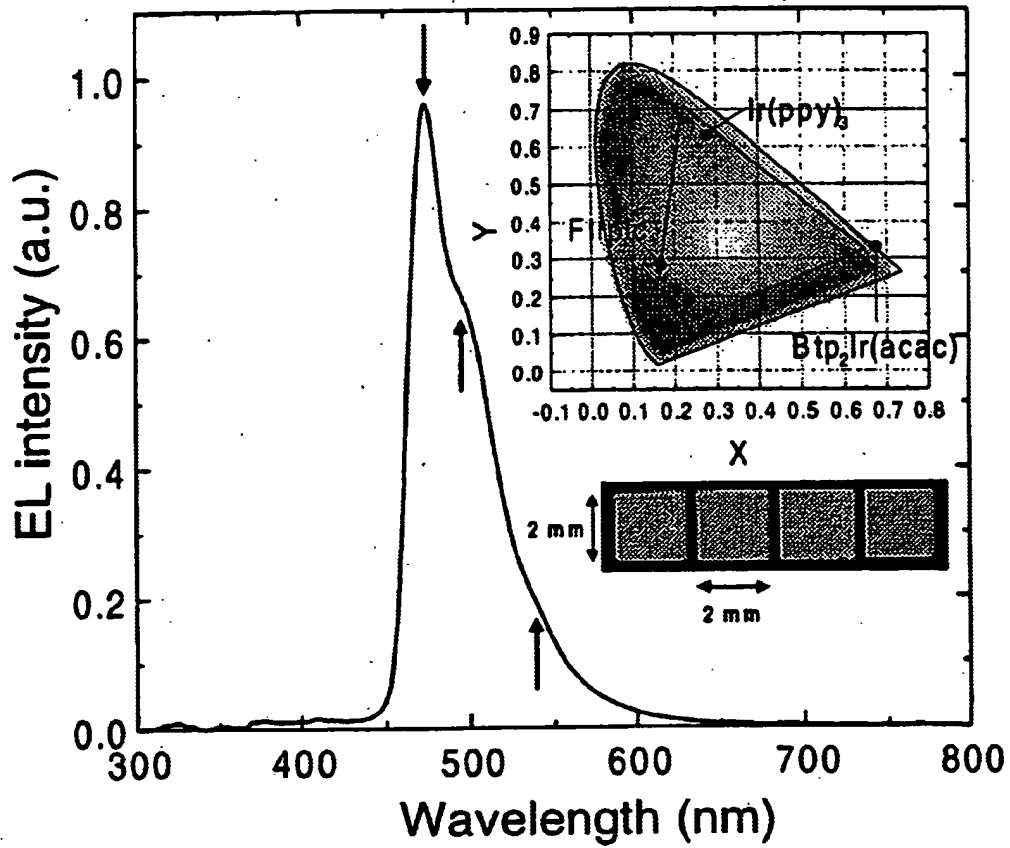


Figure 1b

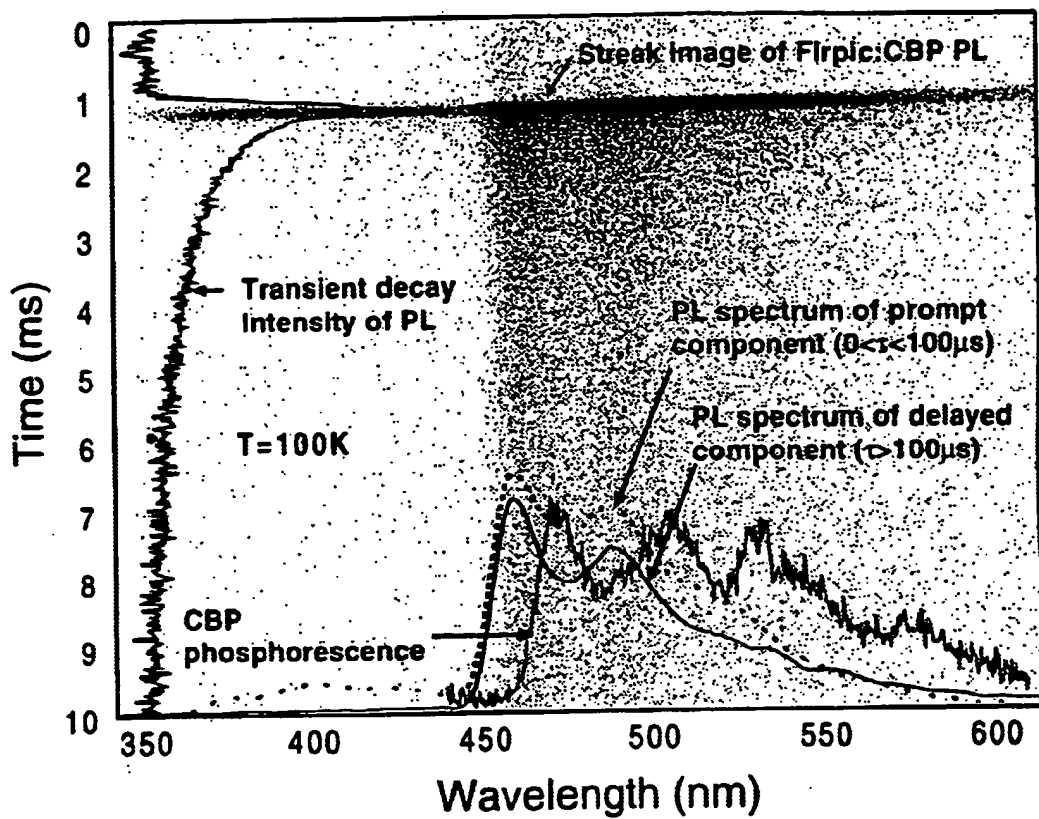


Figure 3

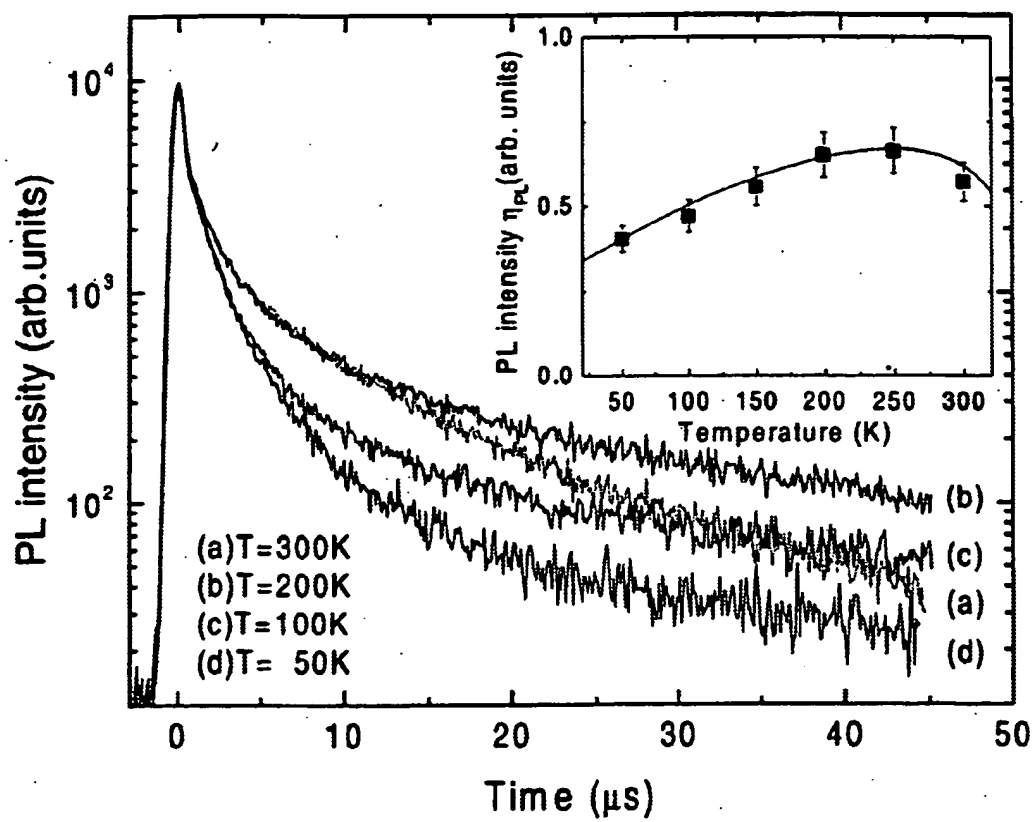
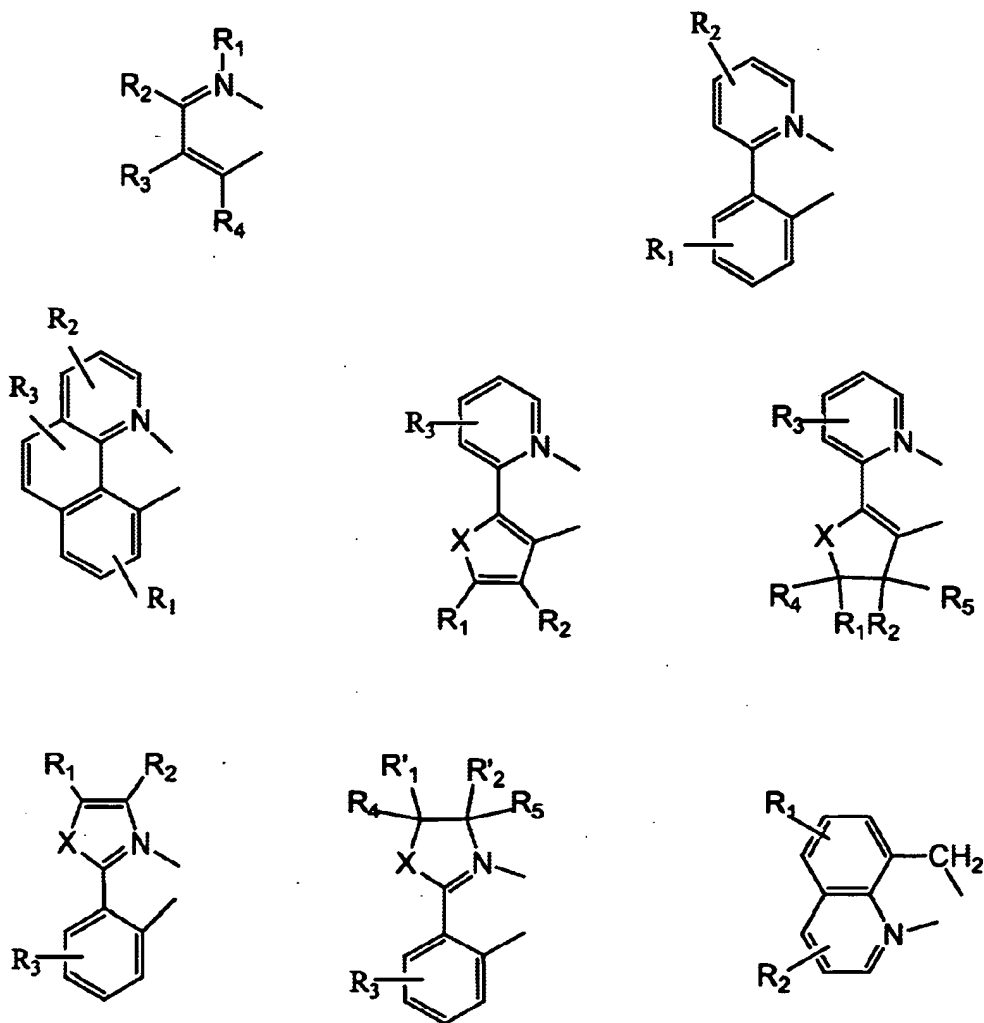


Figure 4

Figure 5a

Generic Mono-Anionic, Bidentate, Carbon-Coordination Ligands-I



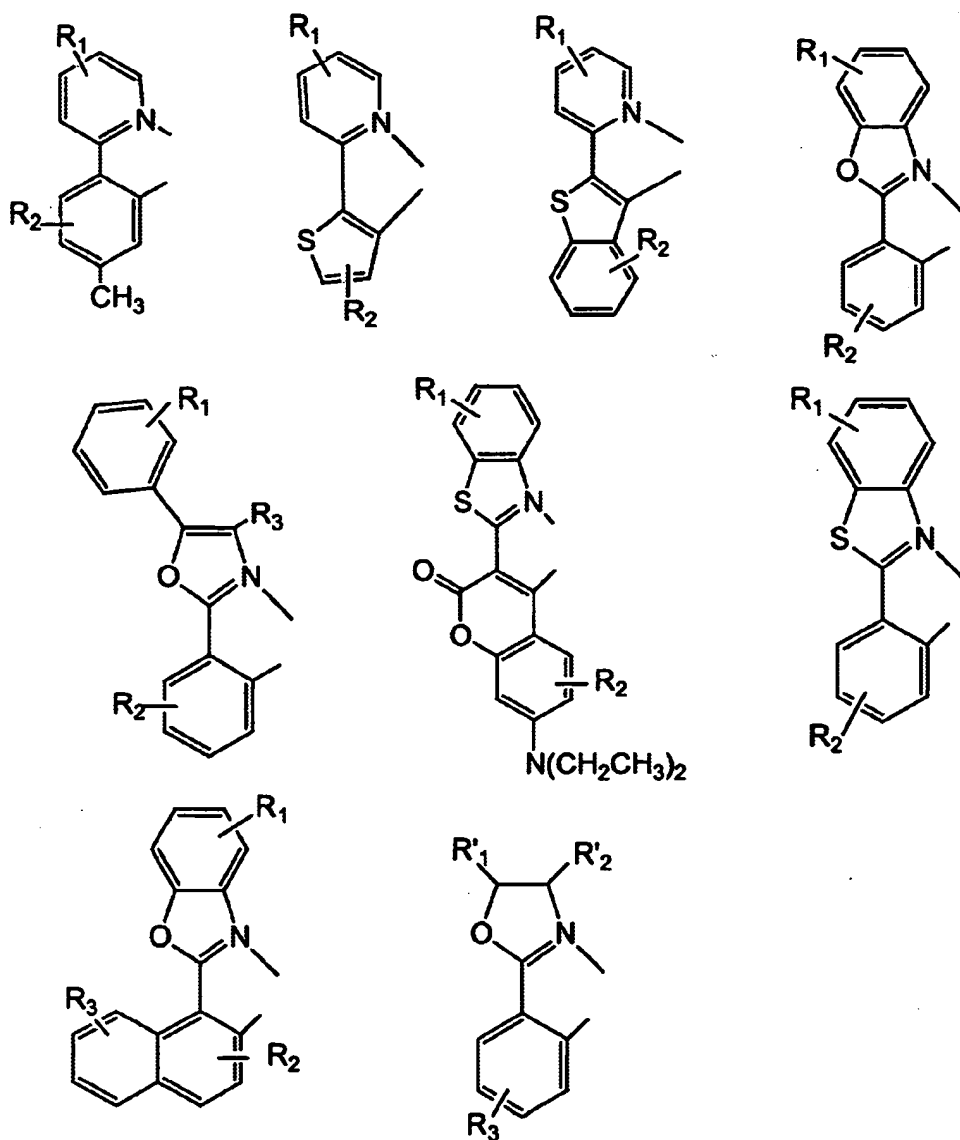
$X = S, O, NR$ ; and  $R_1, R_2, R_3, R_4$  and  $R_5$  are, independently, hydrogen, halogen, alkyl, aryl or arylene; and  $R'_1$  and  $R'_2$  may, in combination, be aryl.





Figure 5b

Generic Mono-Anionic, Bidentate, Carbon-Coordination Ligands-II

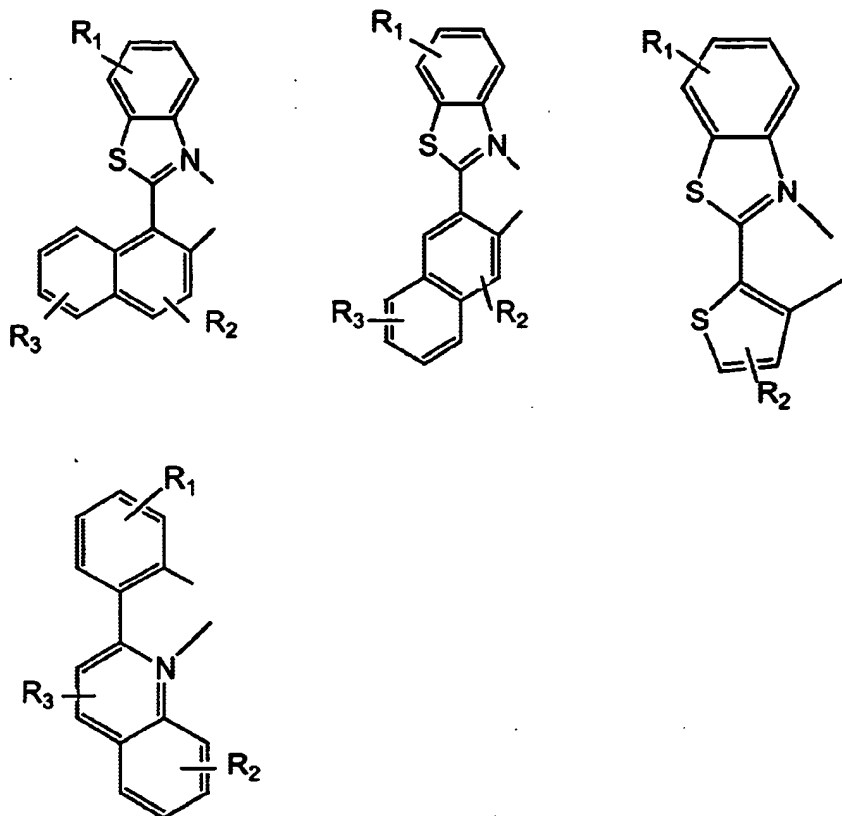


X = S, O, NR; and R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are, independently, hydrogen, halogen, alkyl, aryl or arylene; and R'<sub>1</sub> and R'<sub>2</sub> may, in combination, be aryl.



Figure 5c

Generic Mono-Anionic, Bidentate, Carbon-Coordination Ligands-III

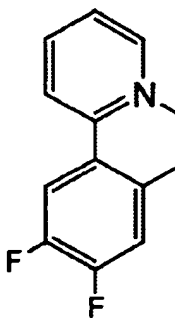
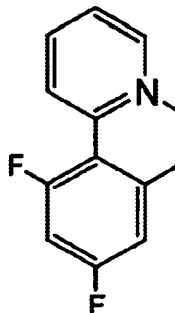
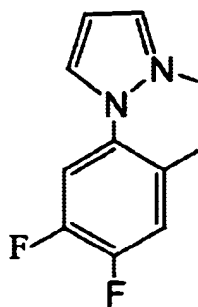


$X = S, O, NR$ ; and  $R_1, R_2, R_3, R_4$  and  $R_5$  are, independently, hydrogen, halogen, alkyl, aryl or arylene.



Figure 5d

Specific Mono-Anionic, Bidentate, Carbon-Coordination Ligands-I



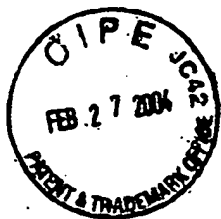
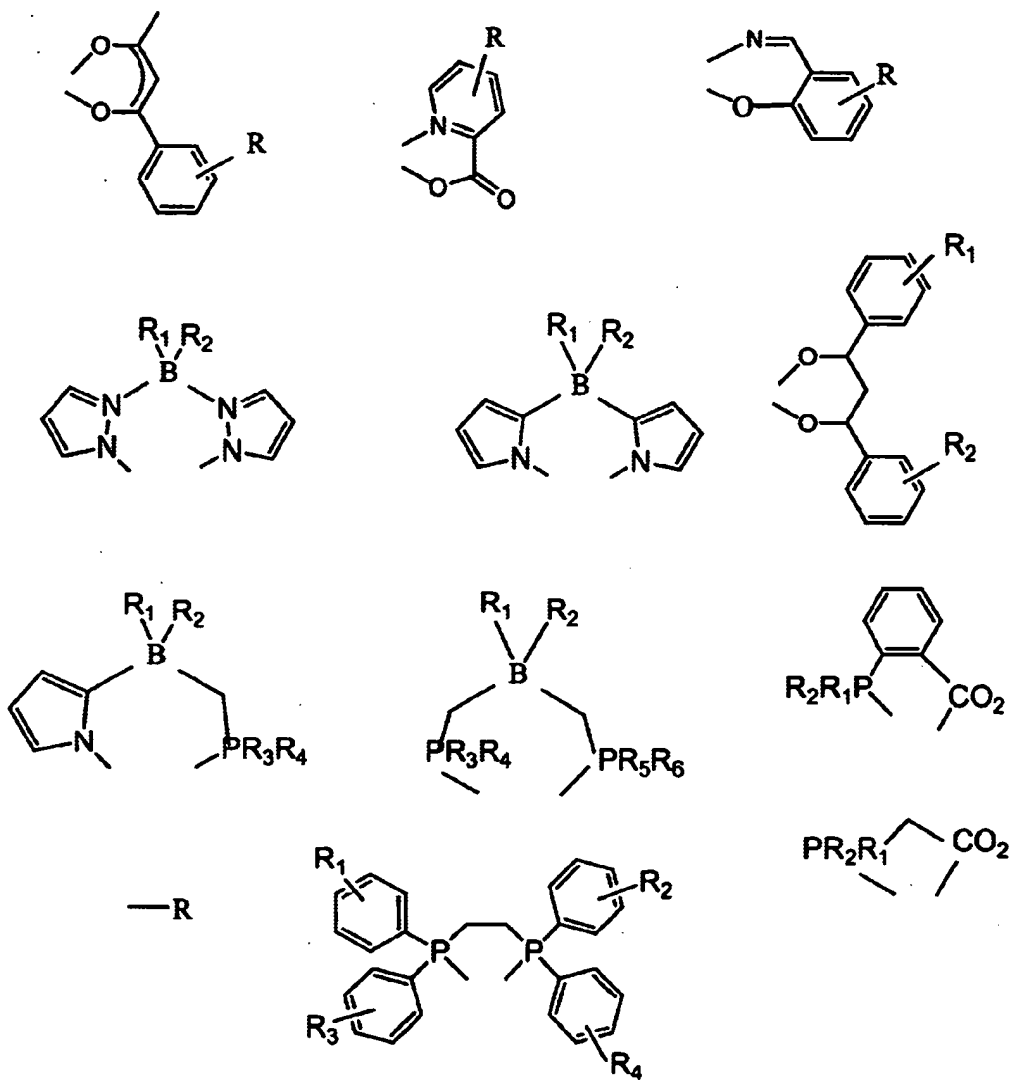


Figure 6a

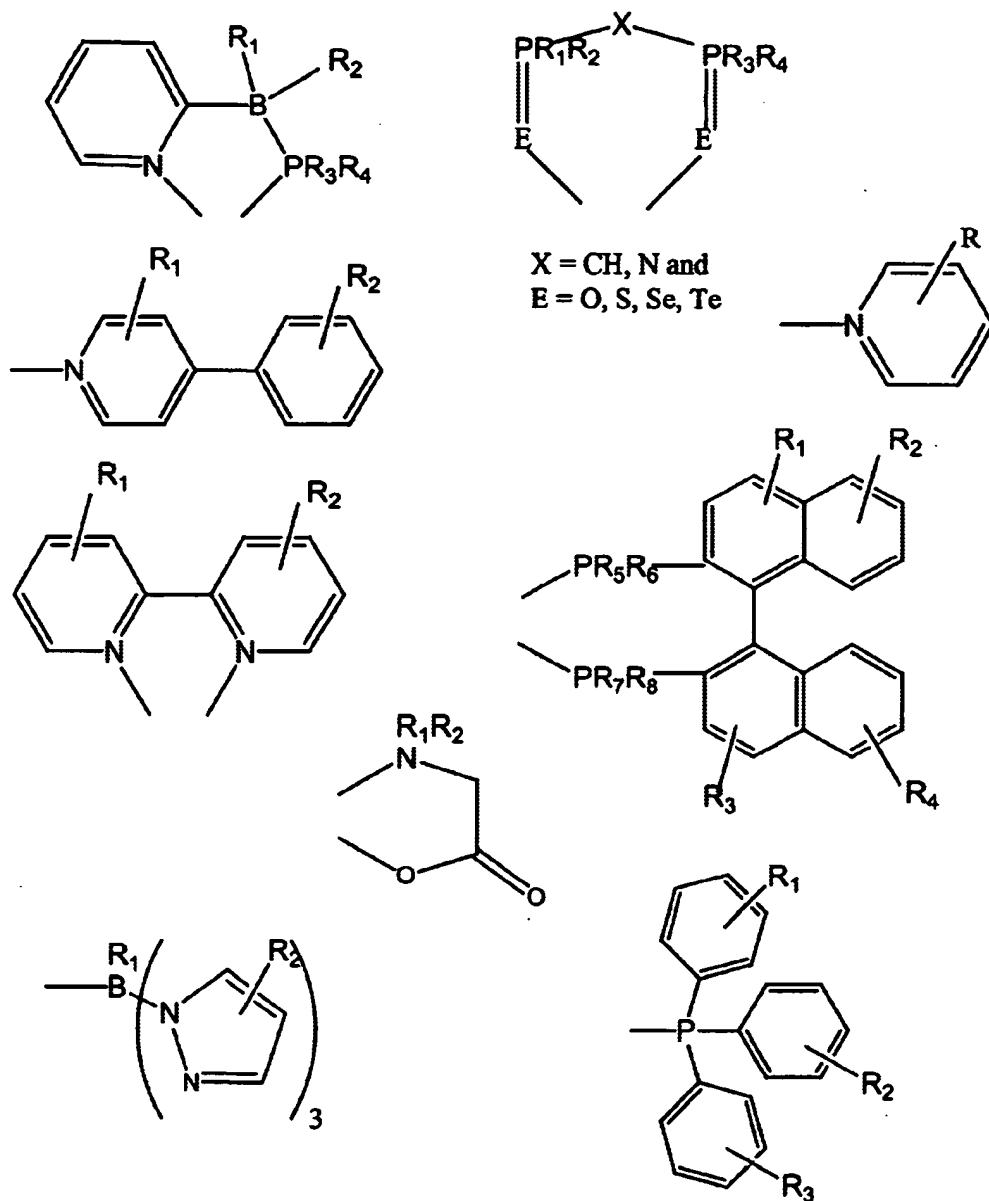
Generic Non-Mono-Anionic, Bidentate, Carbon-Coordination Ligands-I



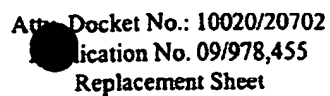
R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> are, independently, hydrogen, halogen, alkyl or aryl.

Figure 6b

Generic Non-Mono-Anionic, Bidentate, Carbon-Coordination Ligands-II



R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> are, independently, hydrogen, halogen, alkyl or aryl.



### Specific Non-Mono-Anionic, Bidentate, Carbon-Coordination Ligands

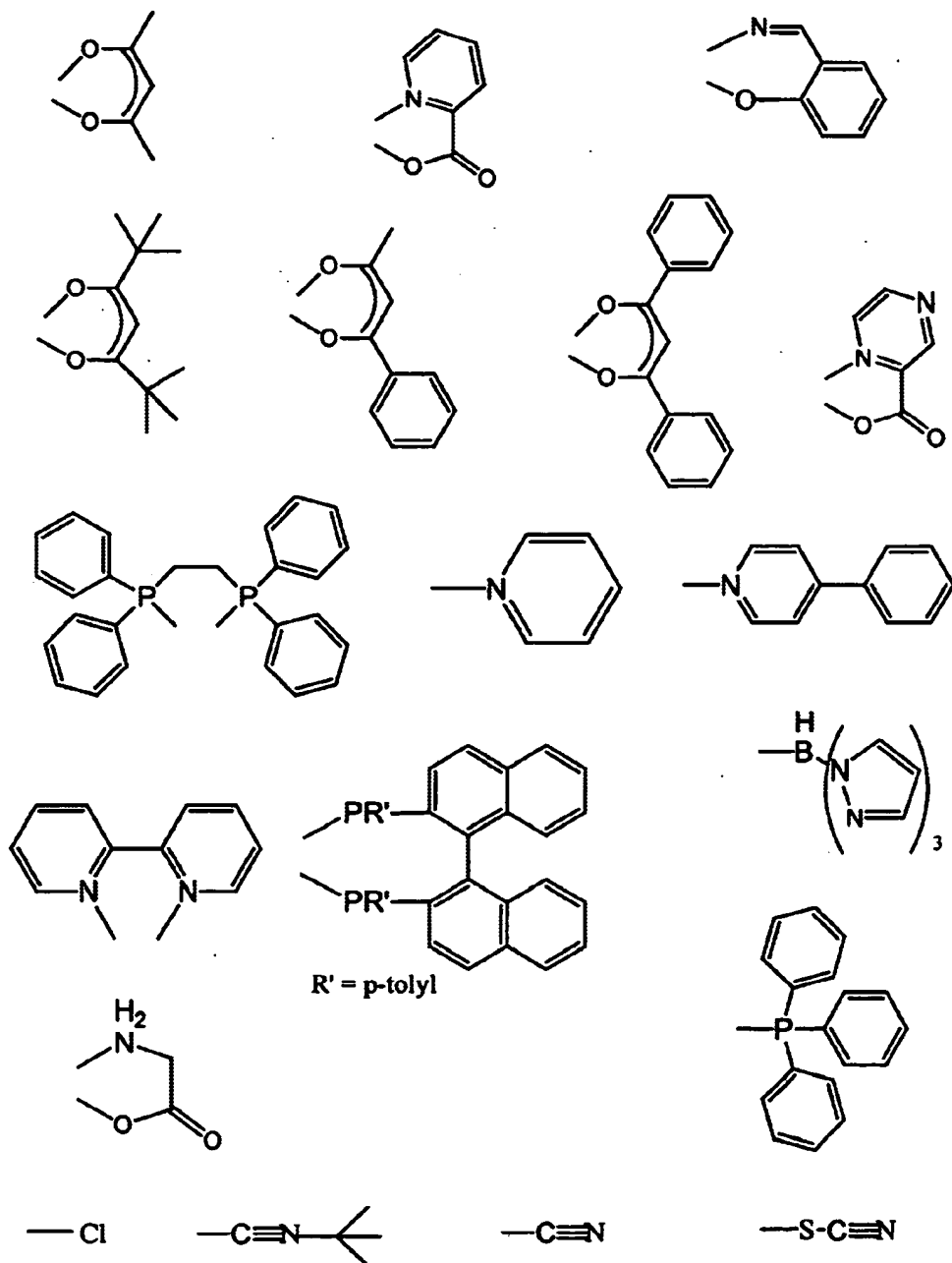




Figure 7a

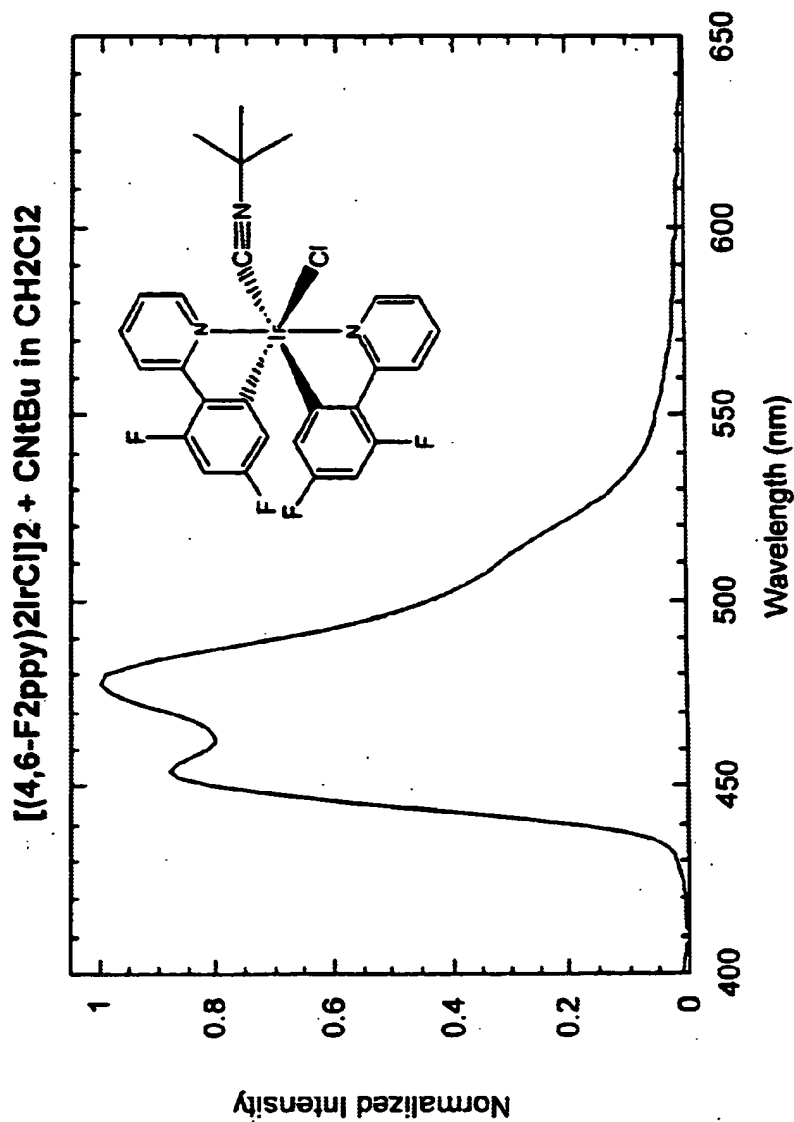




Figure 7b

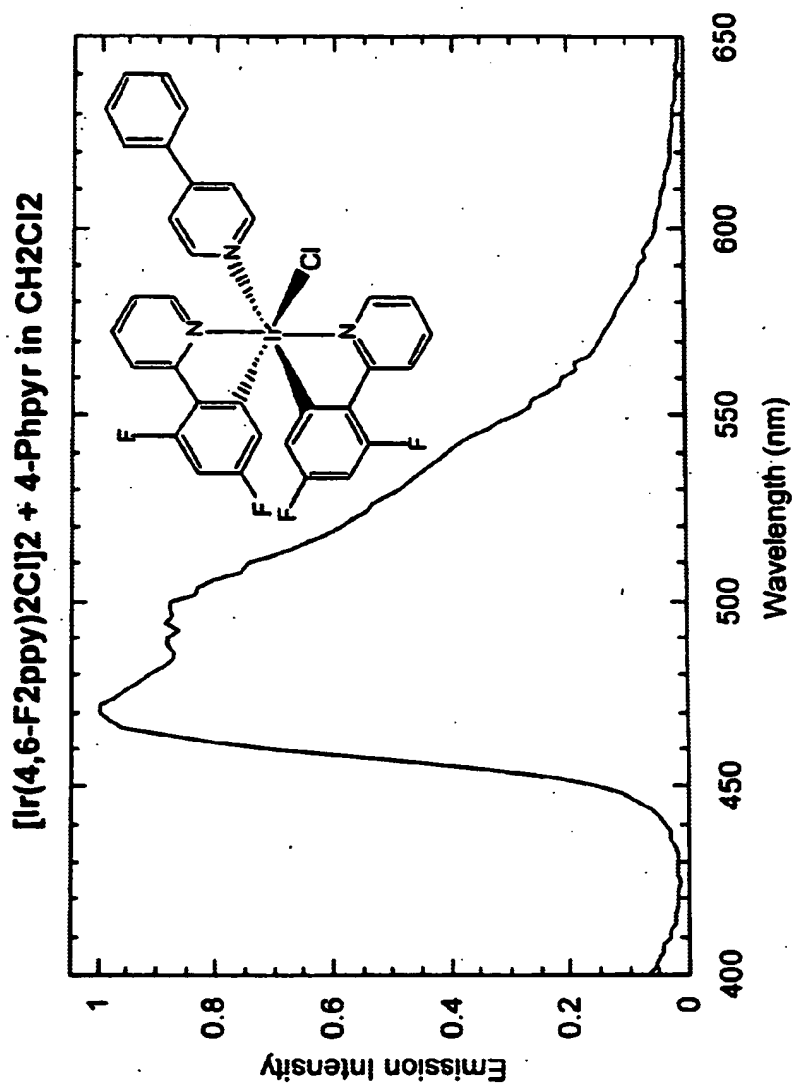






Figure 7c

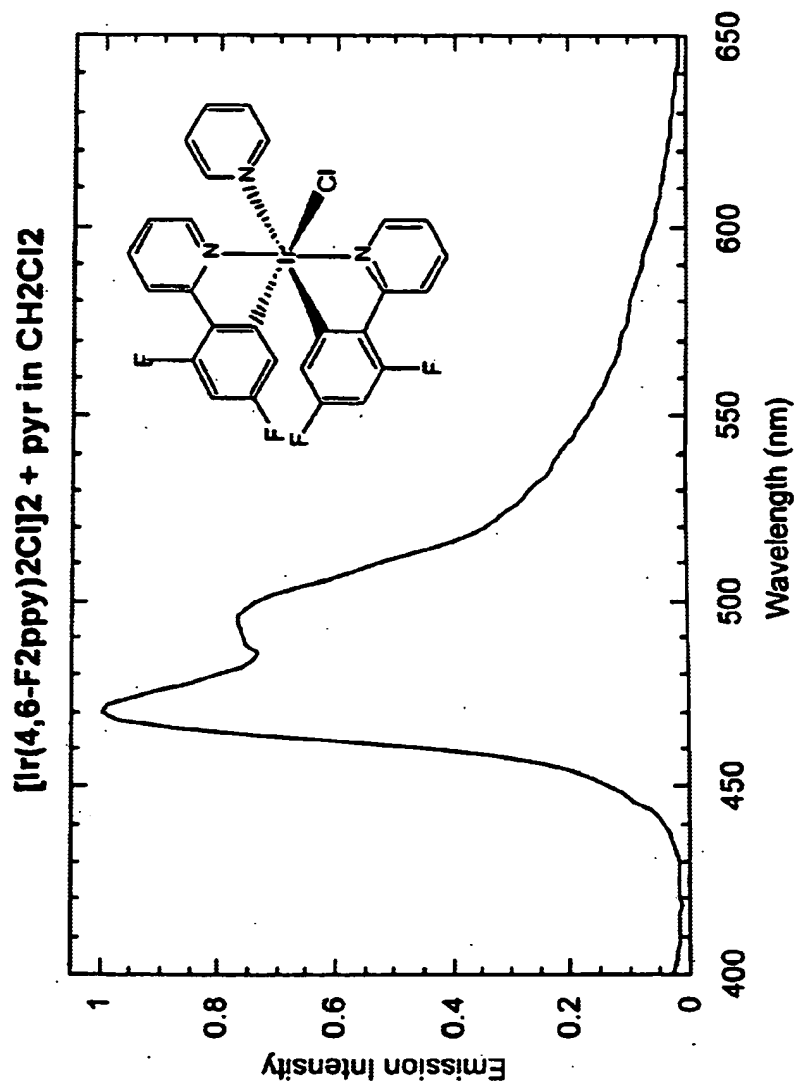




Figure 7d

**$[\text{Ir}(\text{4,6-F}_2\text{ppy})_2\text{Cl}]_2 + \text{PPh}_3$  in  $\text{CH}_2\text{Cl}_2$**

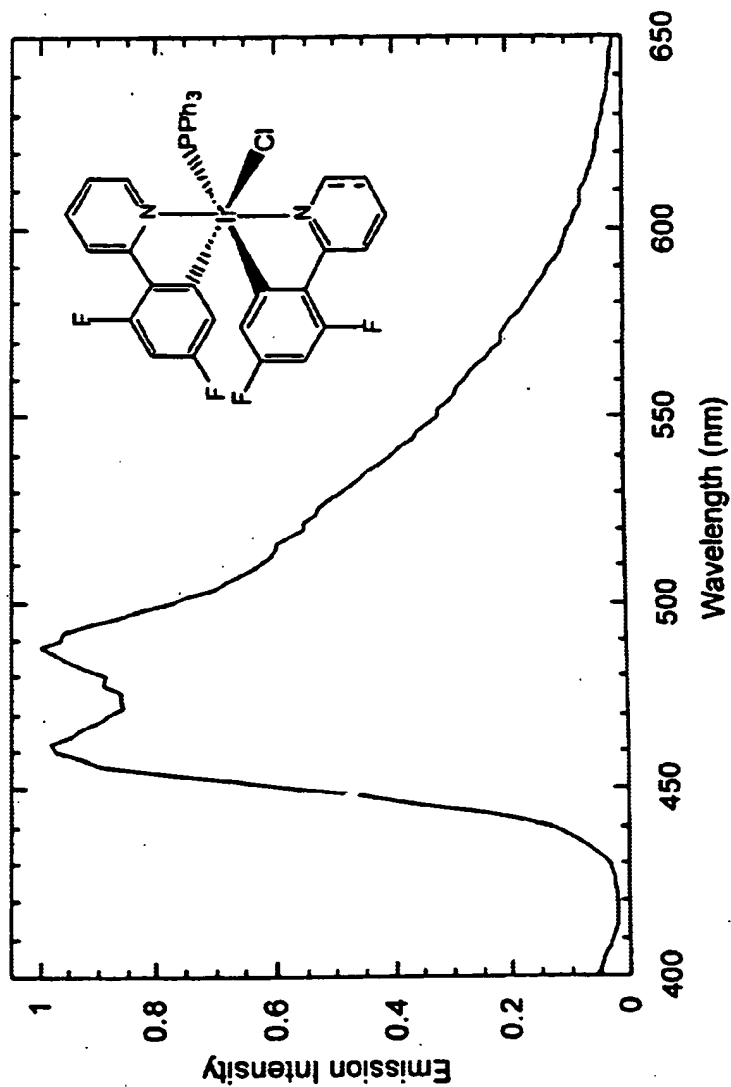




Figure 7e

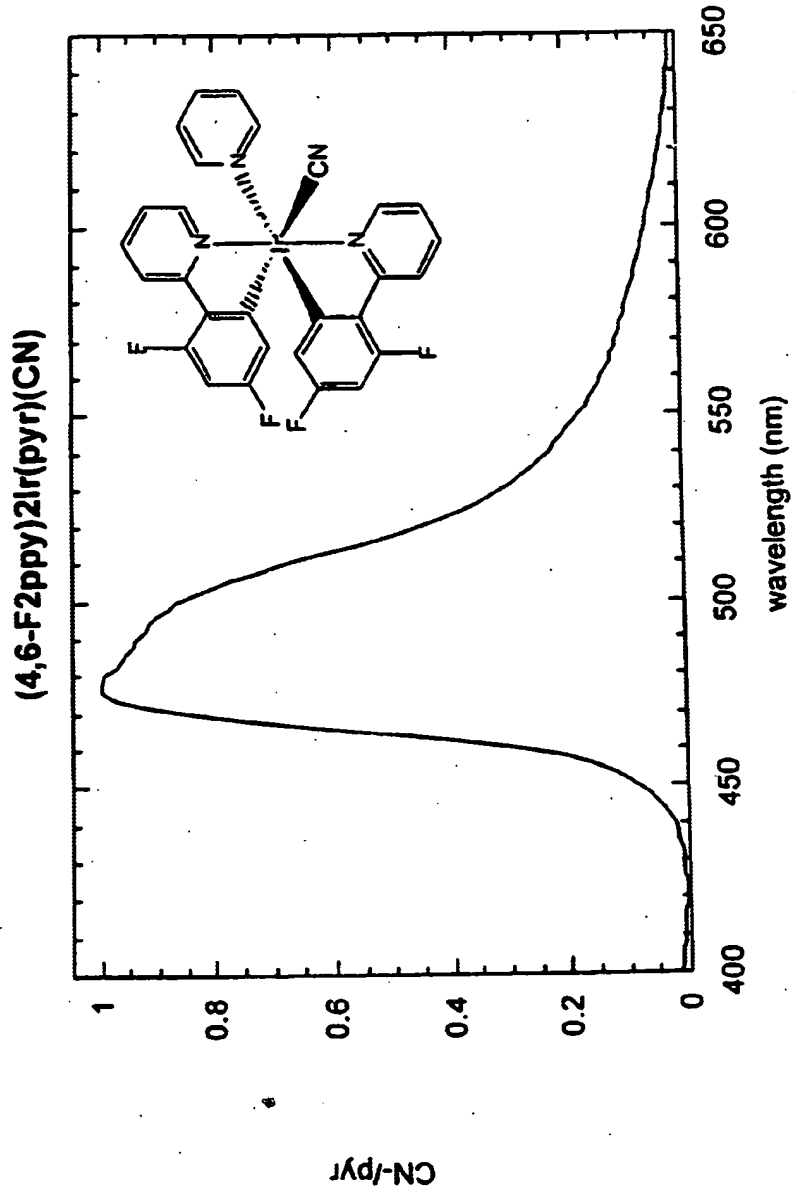




Figure 7f

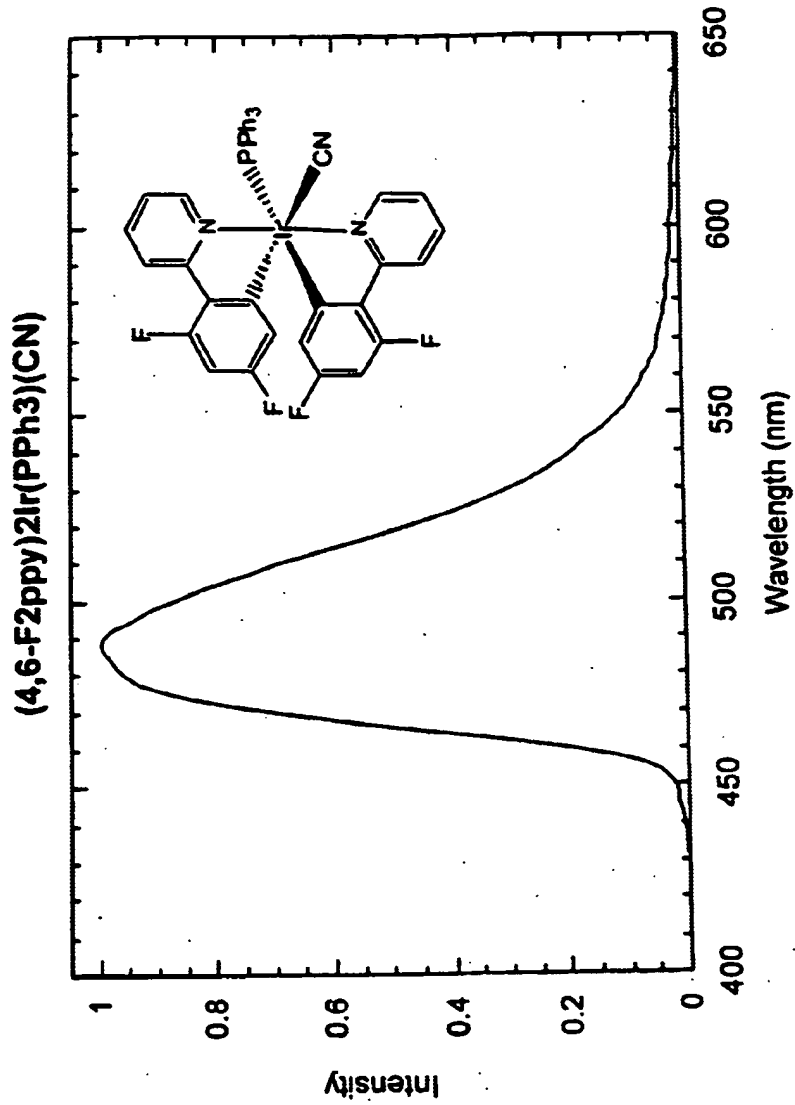




Figure 7g

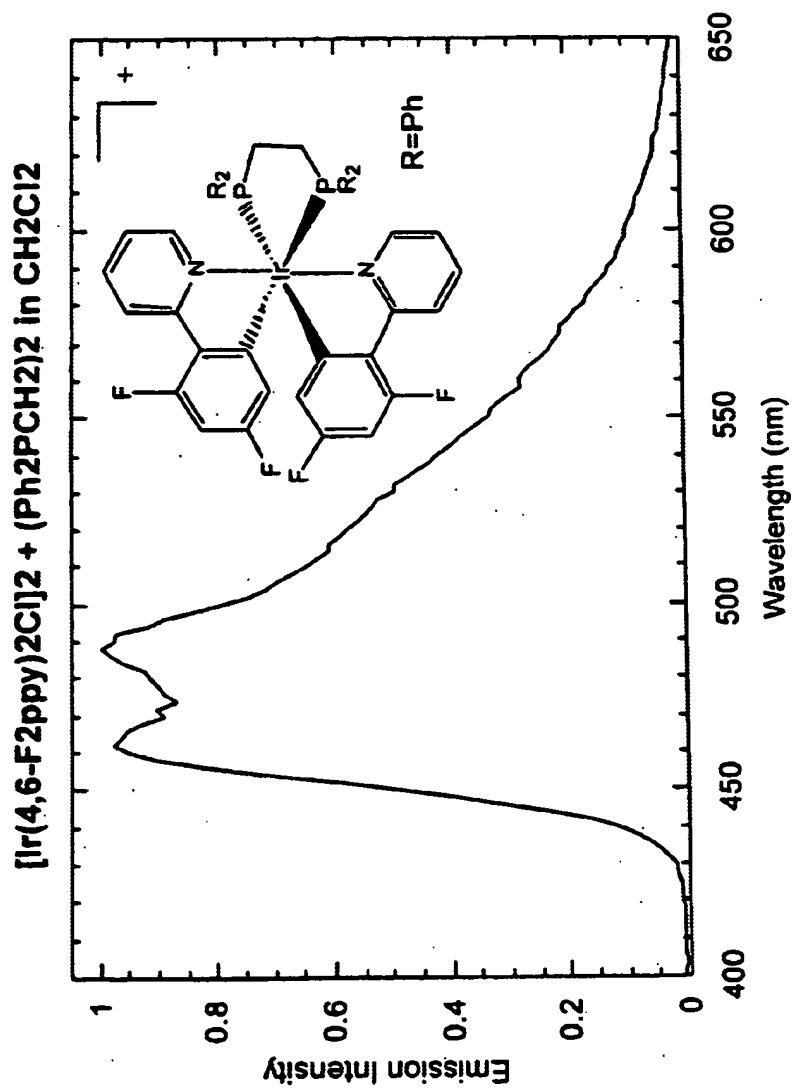




Figure 7h

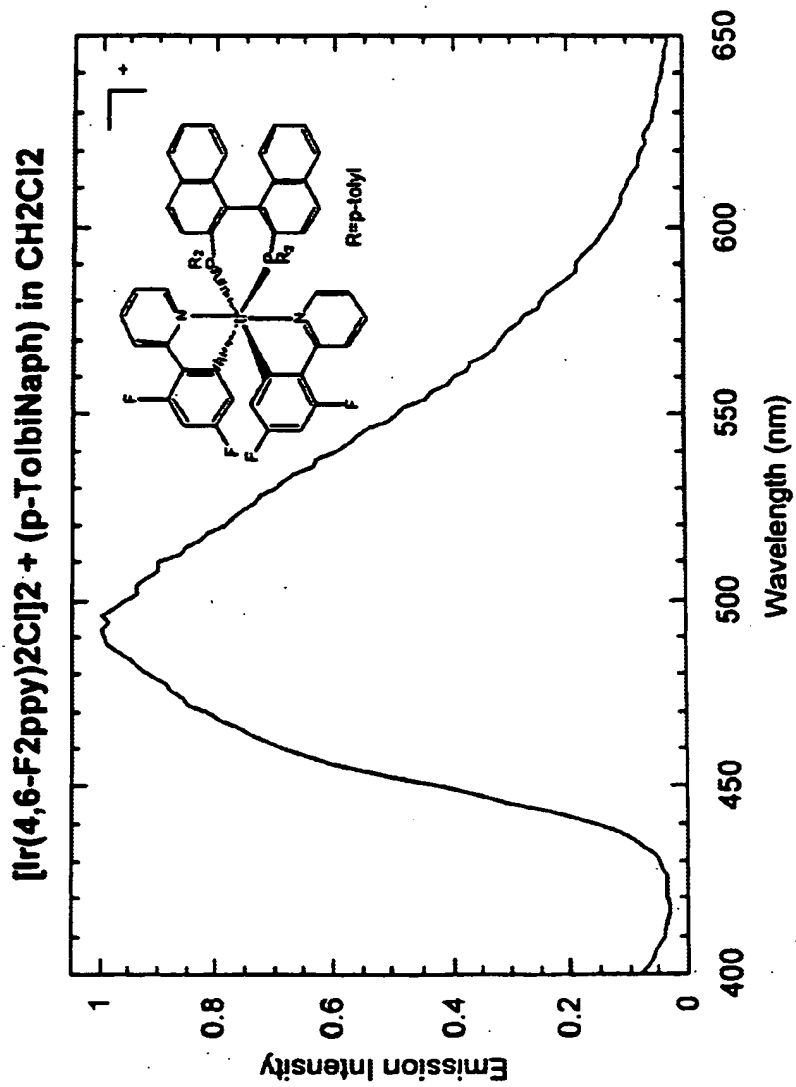




Figure 7i

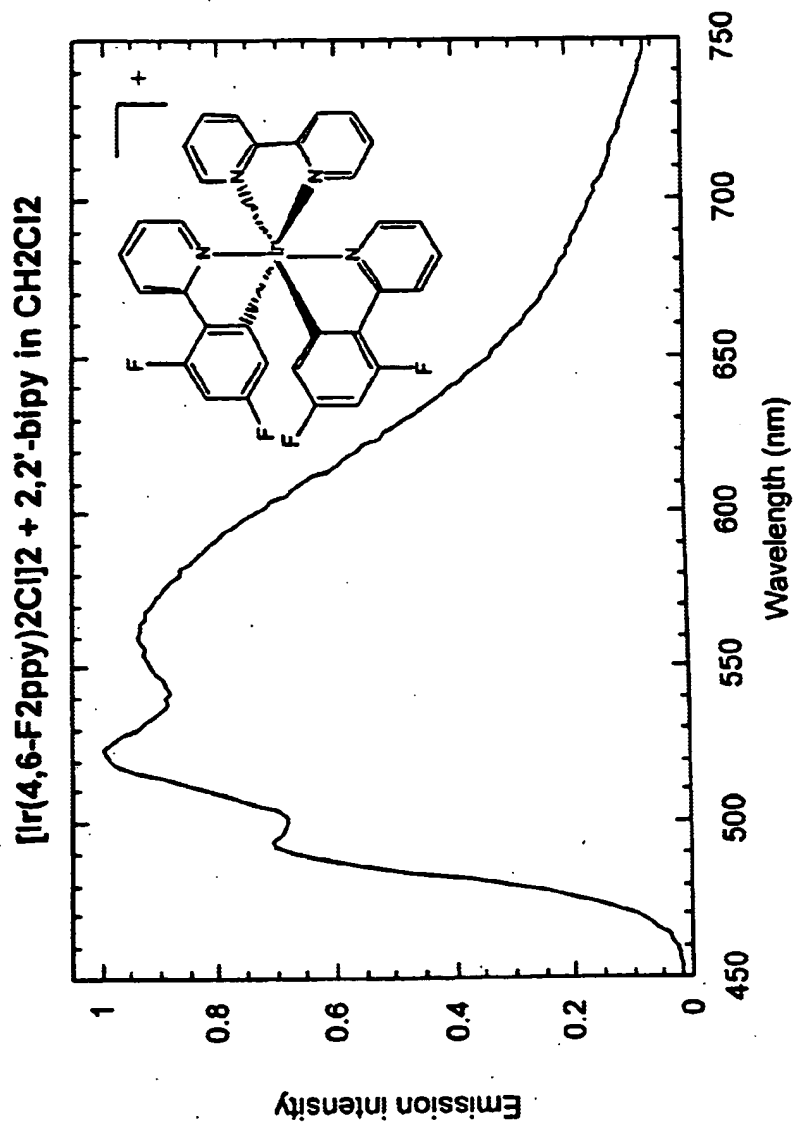




Figure 7j

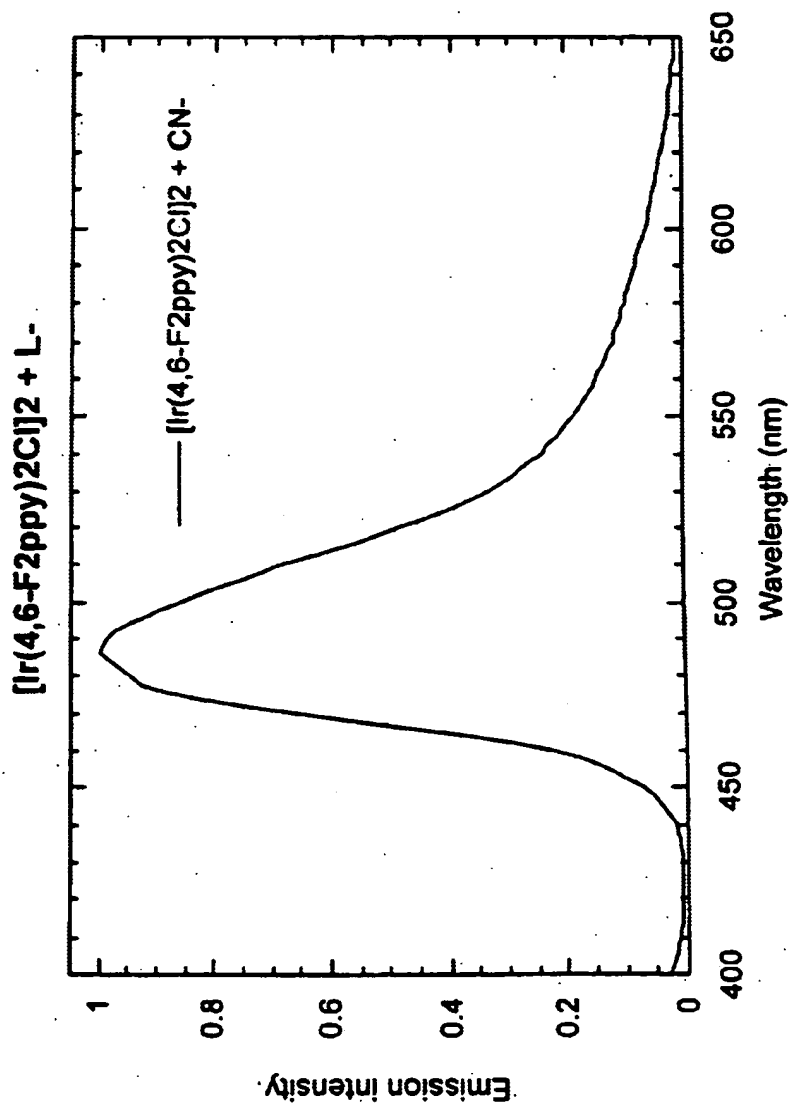






Figure 7k

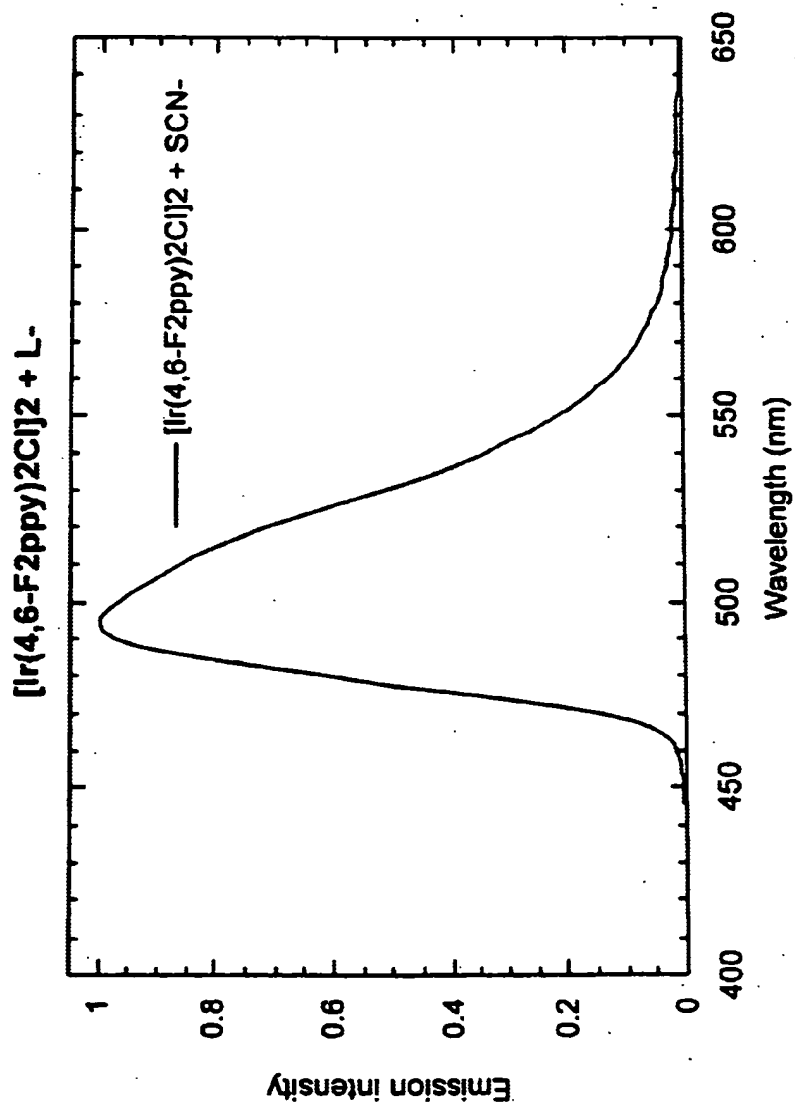




Figure 71

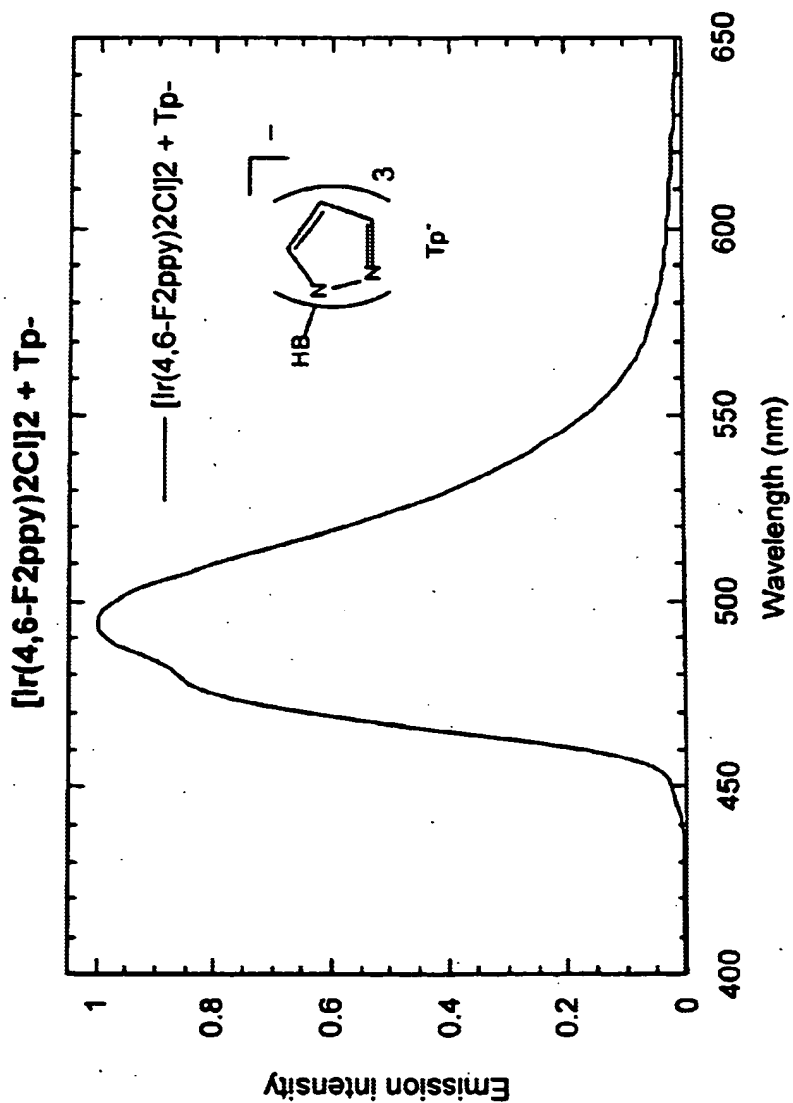




Figure 7m

**Ir(4,6-F<sub>2</sub>ppy)<sub>2</sub>(acac) in CH<sub>2</sub>Cl<sub>2</sub>**

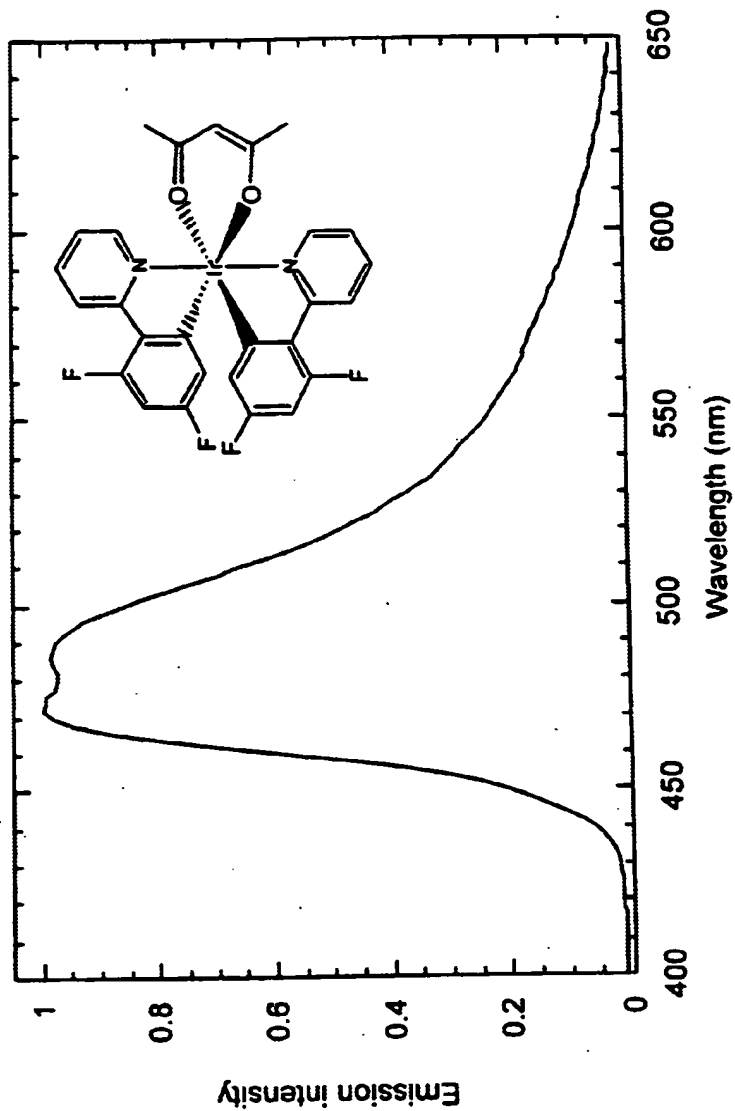




Figure 7n

(4,6-F<sub>2</sub>ppy)<sub>2</sub>Ir(glycine)

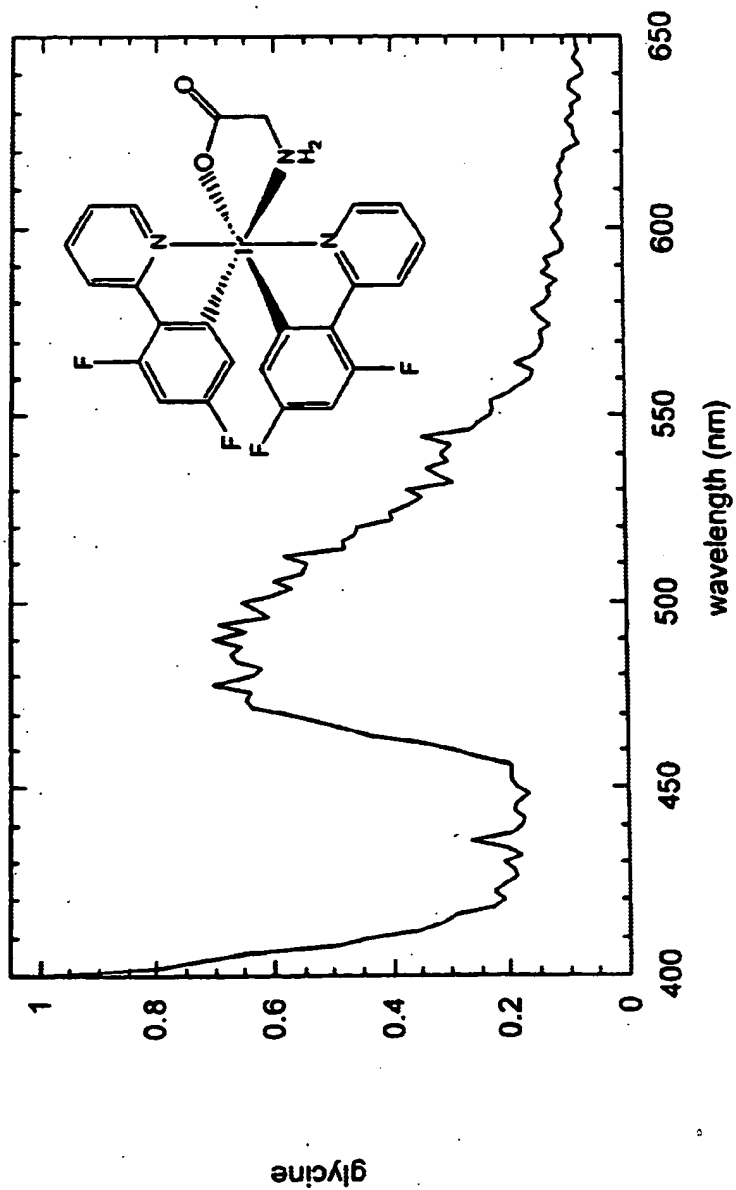




Figure 7o

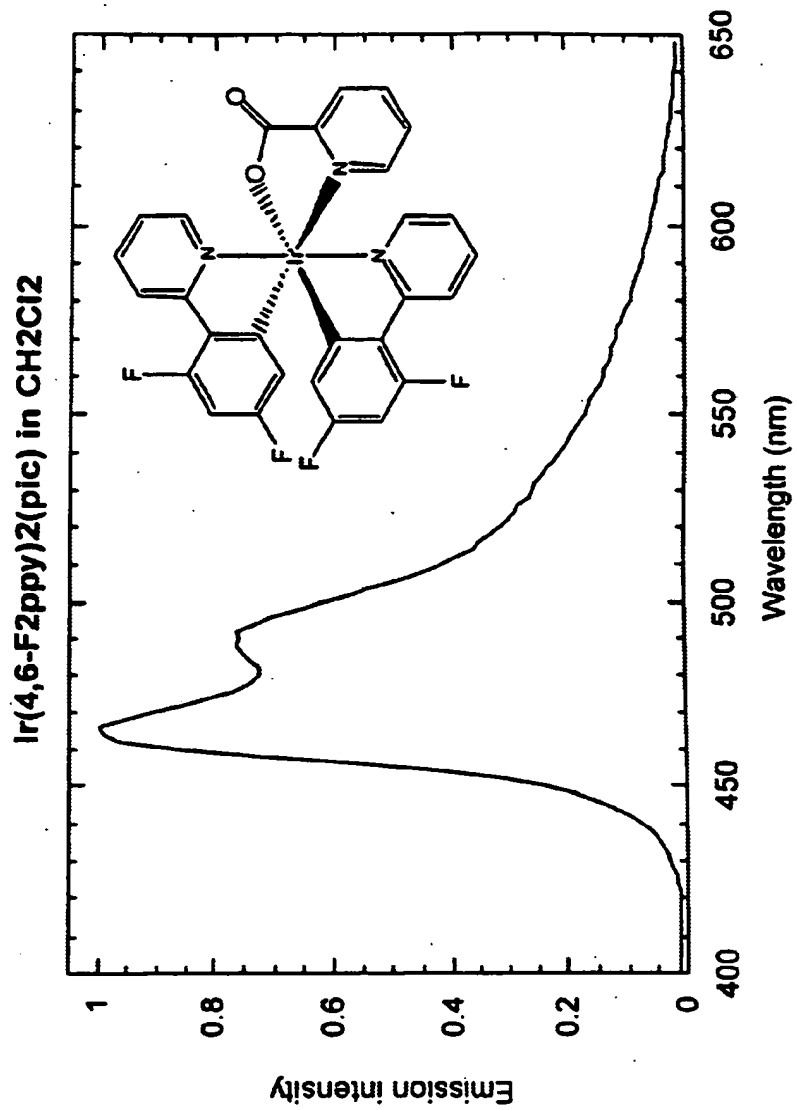
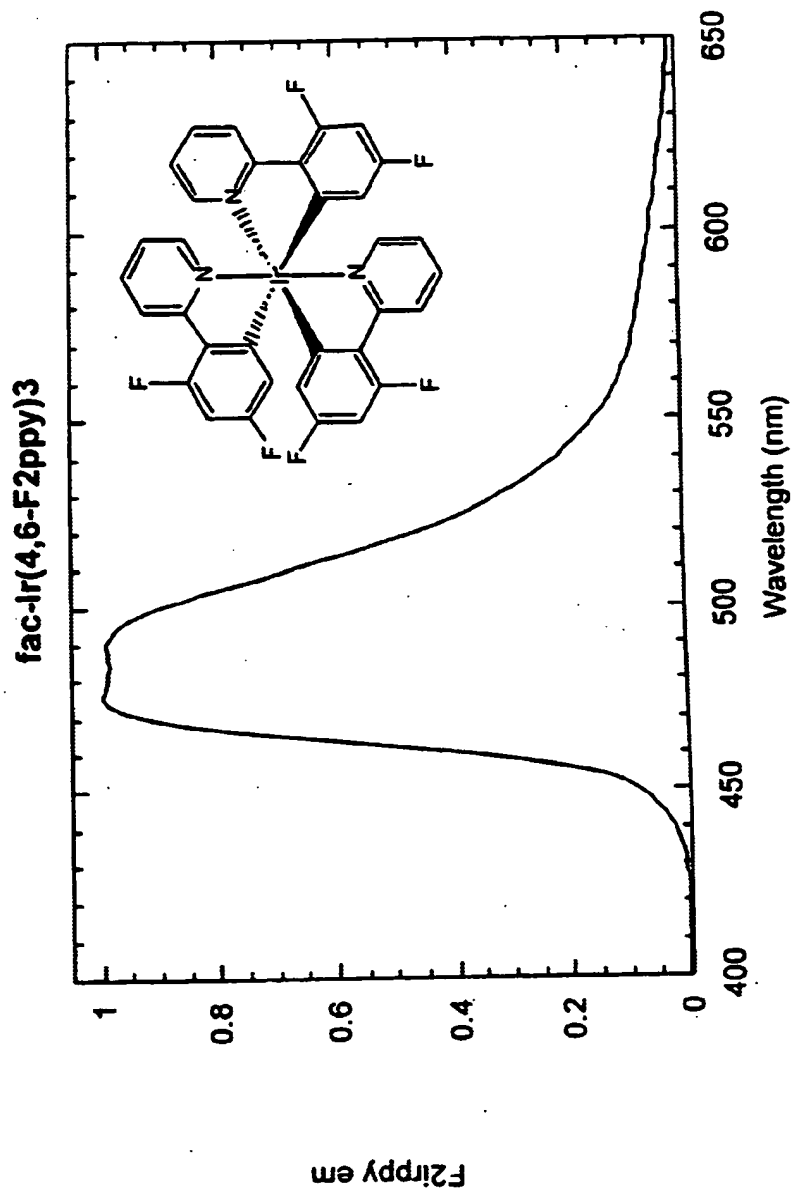




Figure 7p



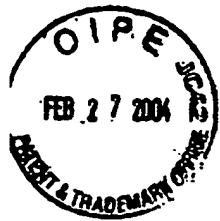


Figure 7q

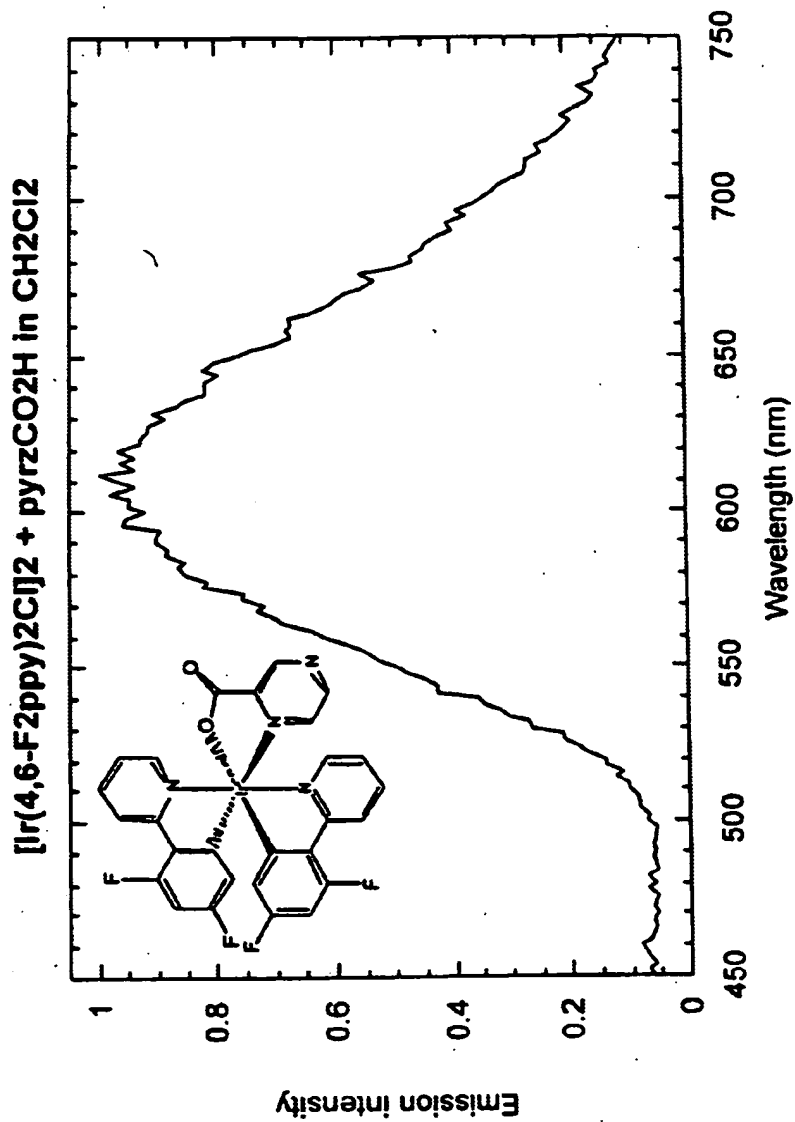




Figure 7r

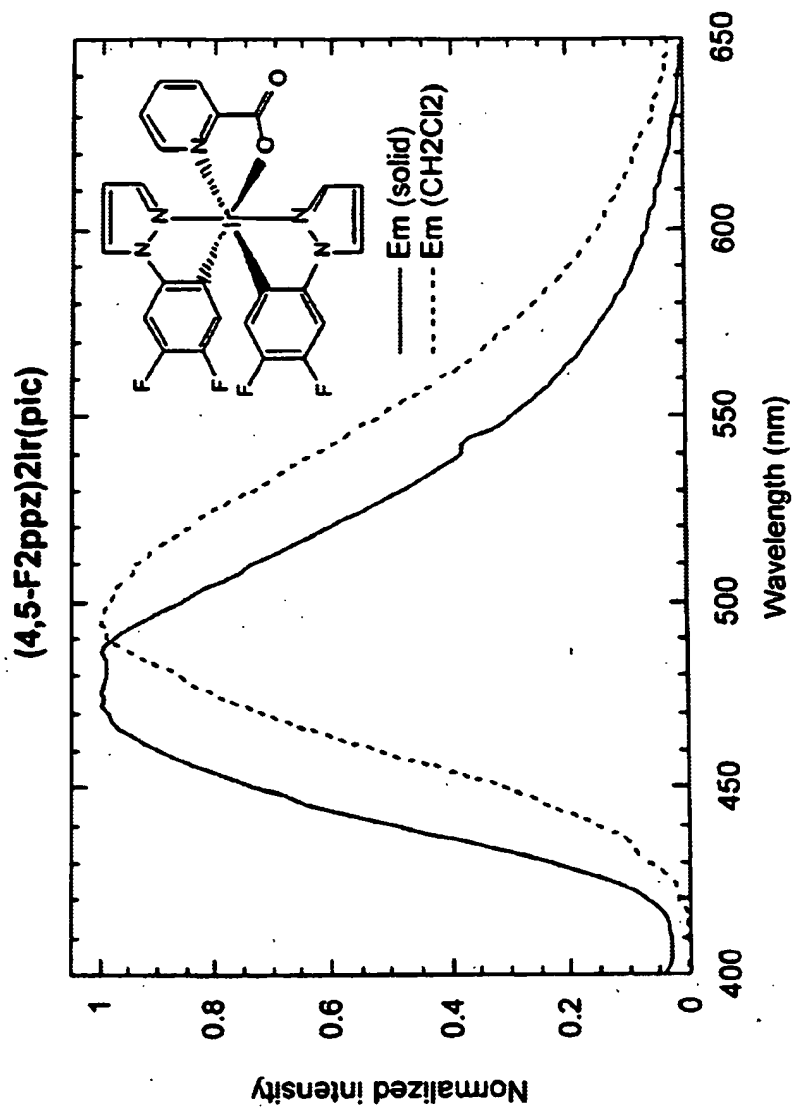
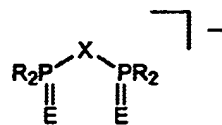
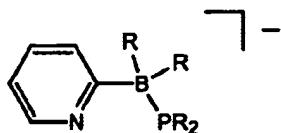
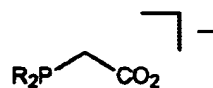
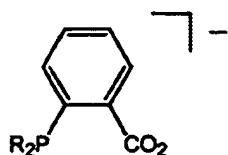
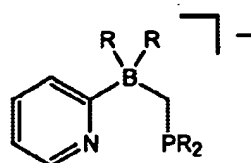
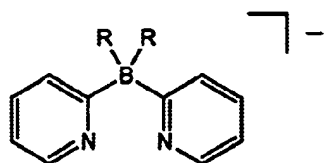
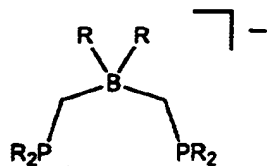
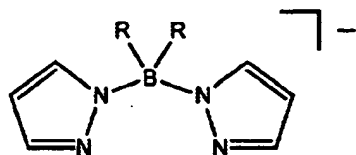






Figure 8a



X=CH, N  
E=O, S, Se, Te

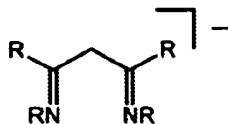




Figure 8b

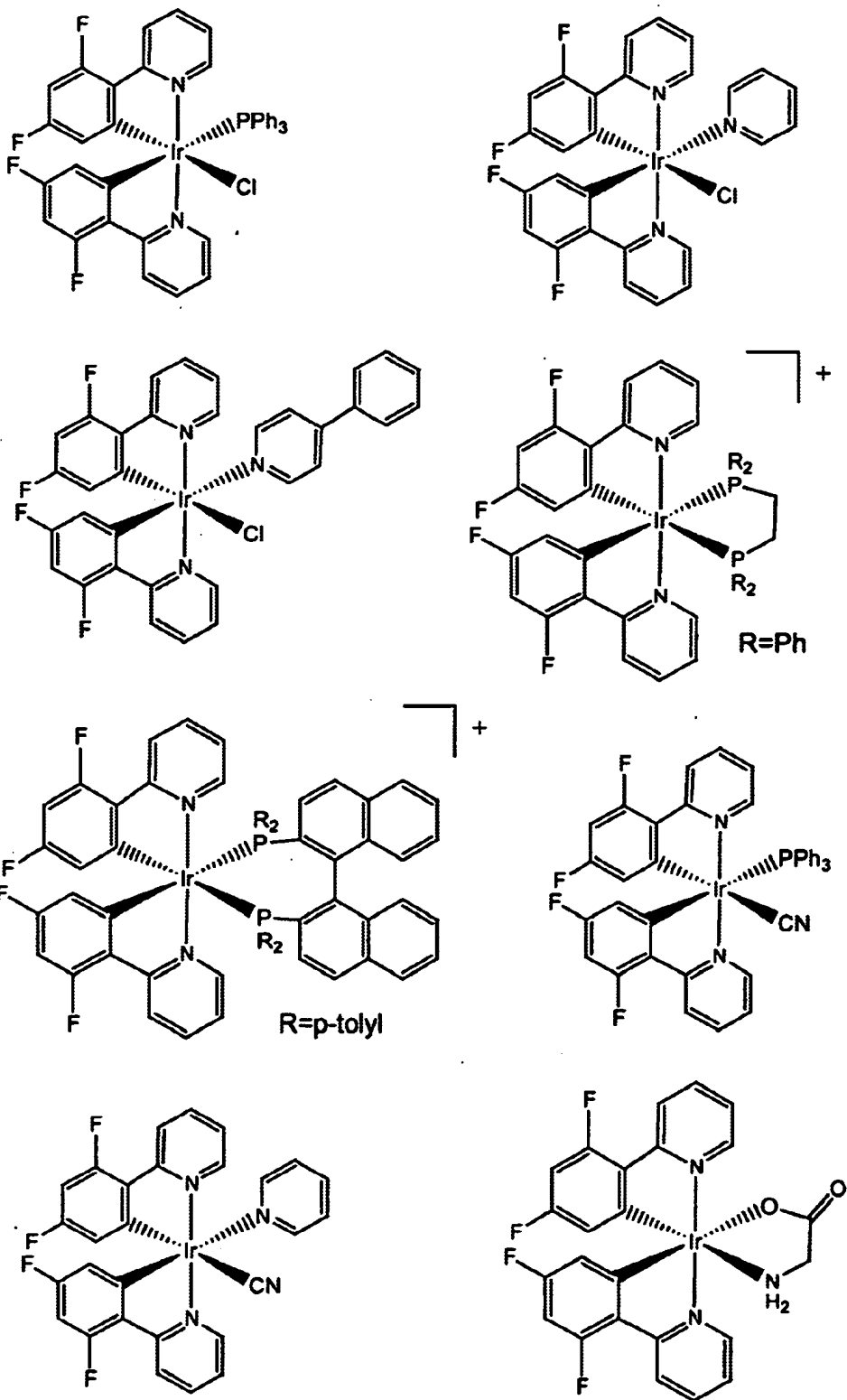




Figure 8c

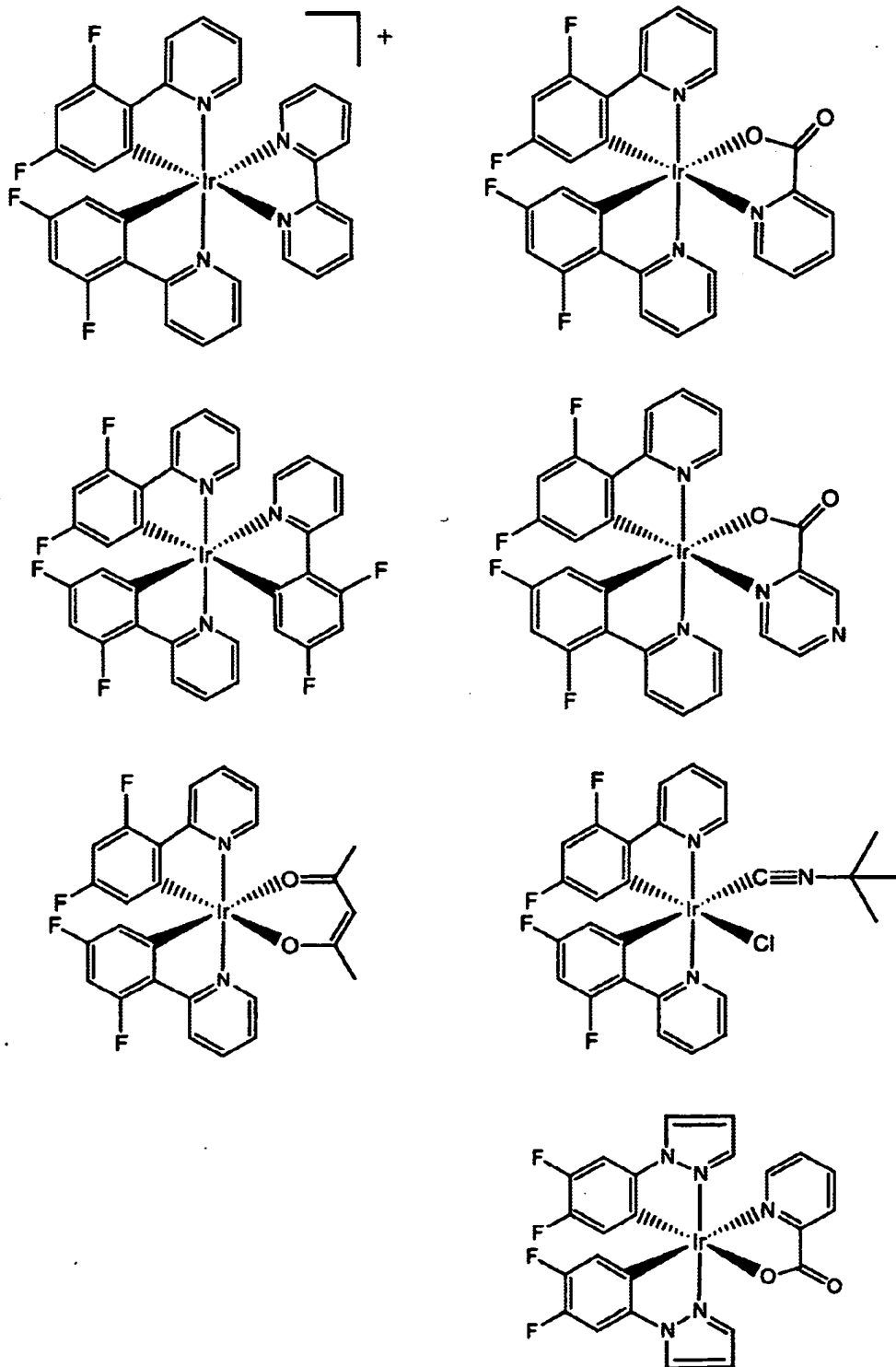




Figure 8d

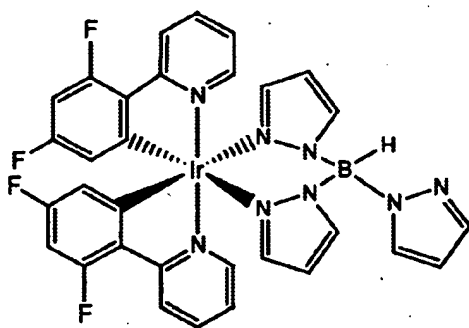
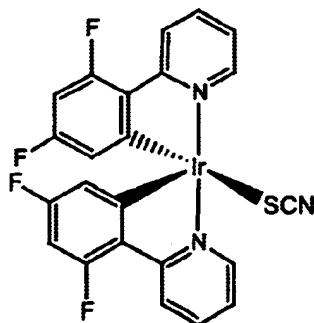
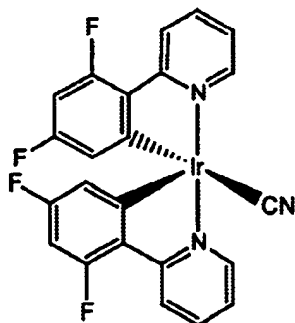
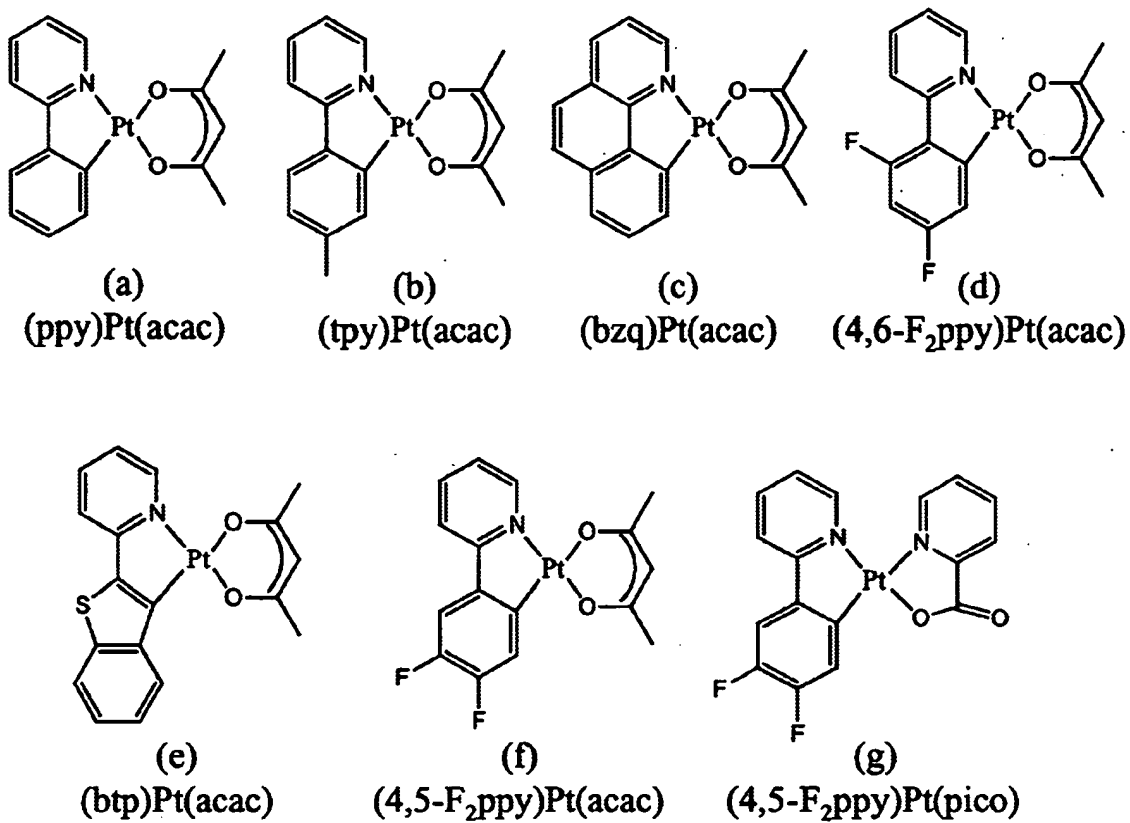


Figure 9



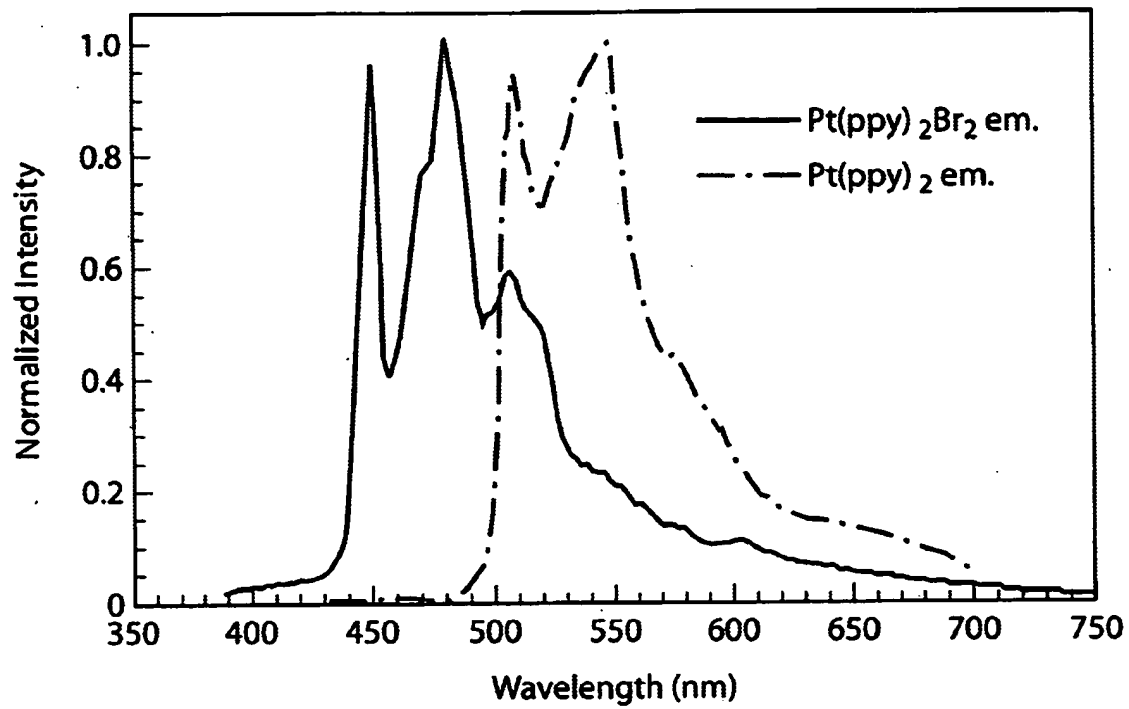


Fig. 10

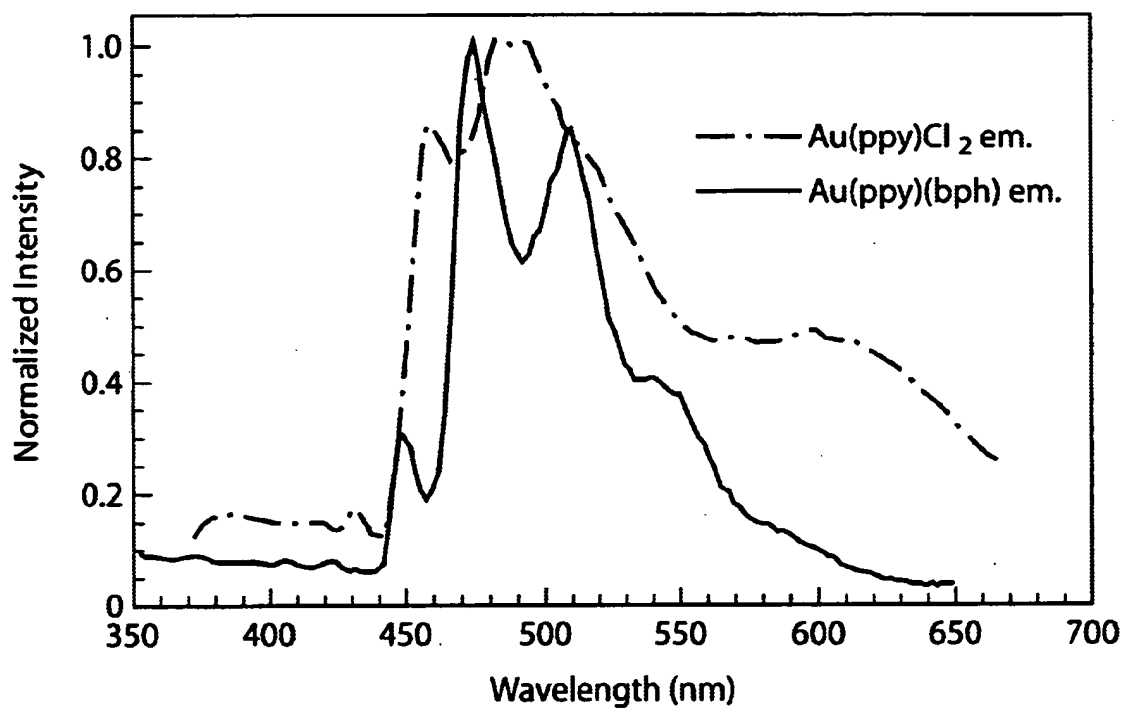


Fig. 11

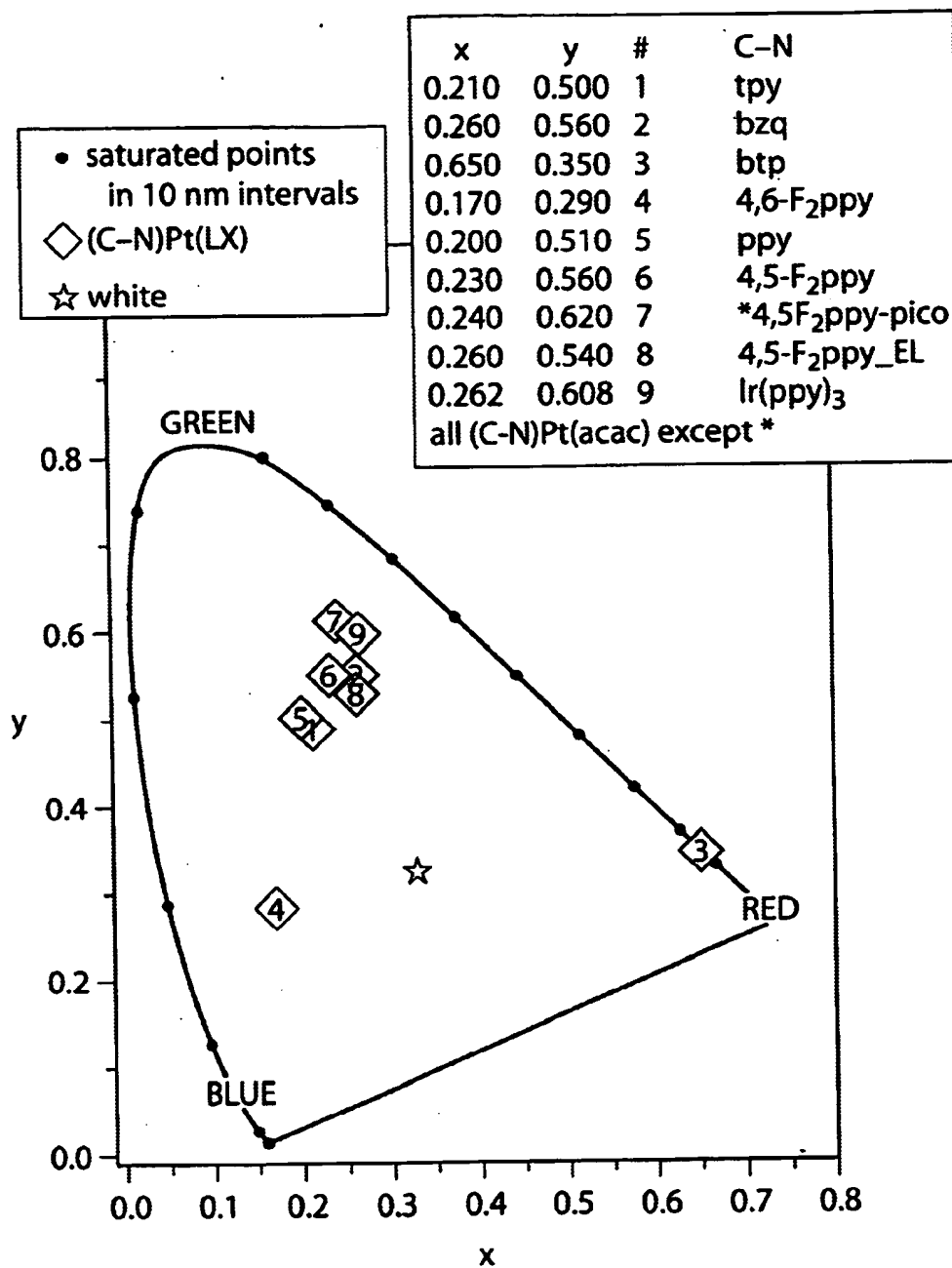


FIG. 12



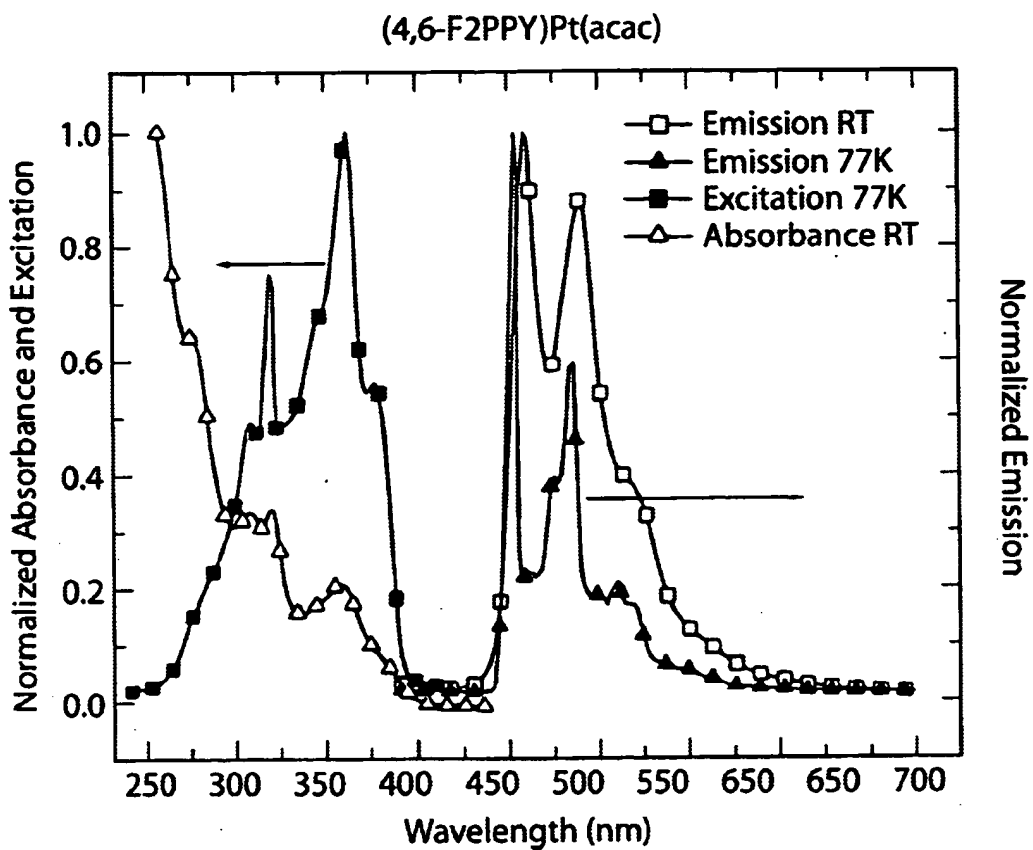


Fig. 13

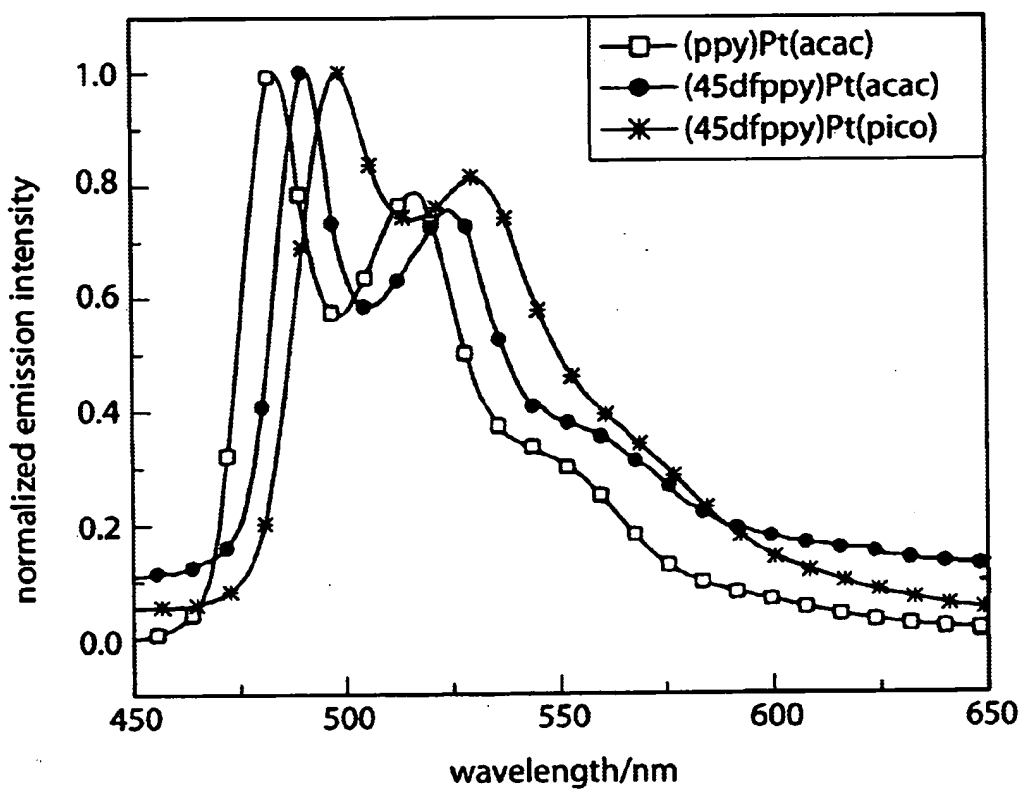


Fig. 14

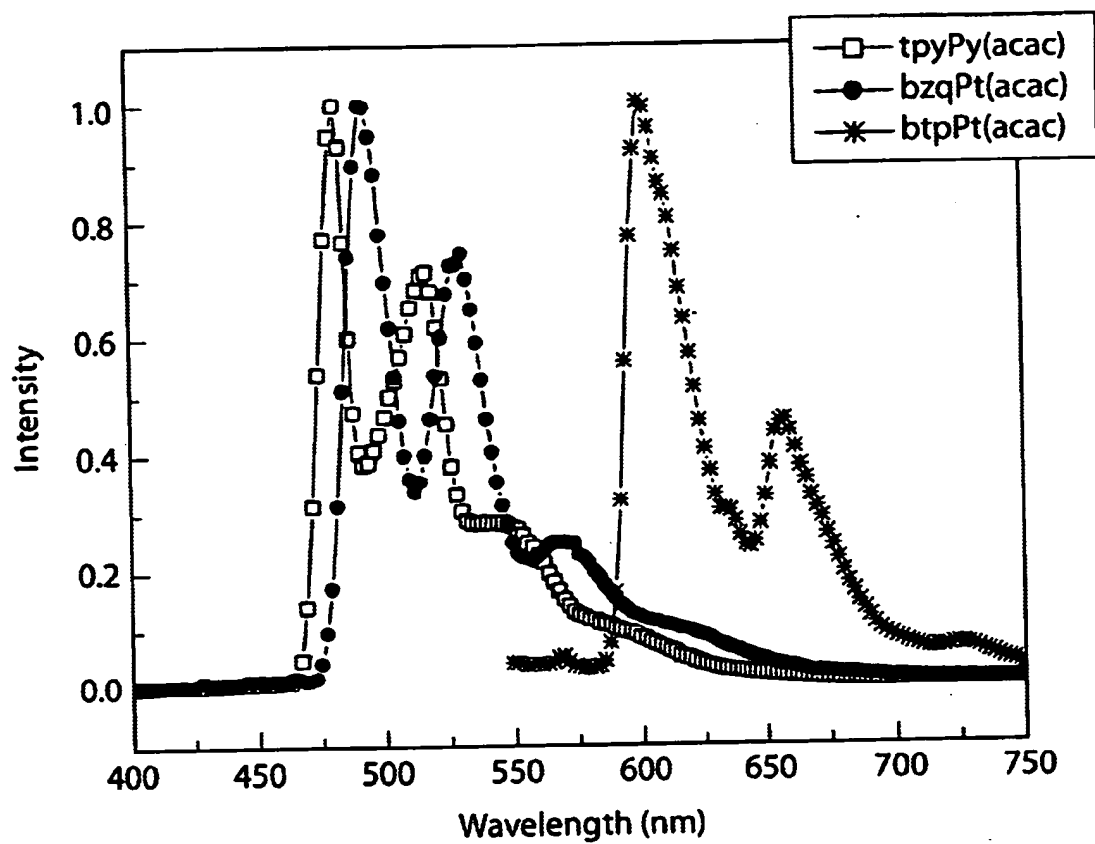


Fig. 15

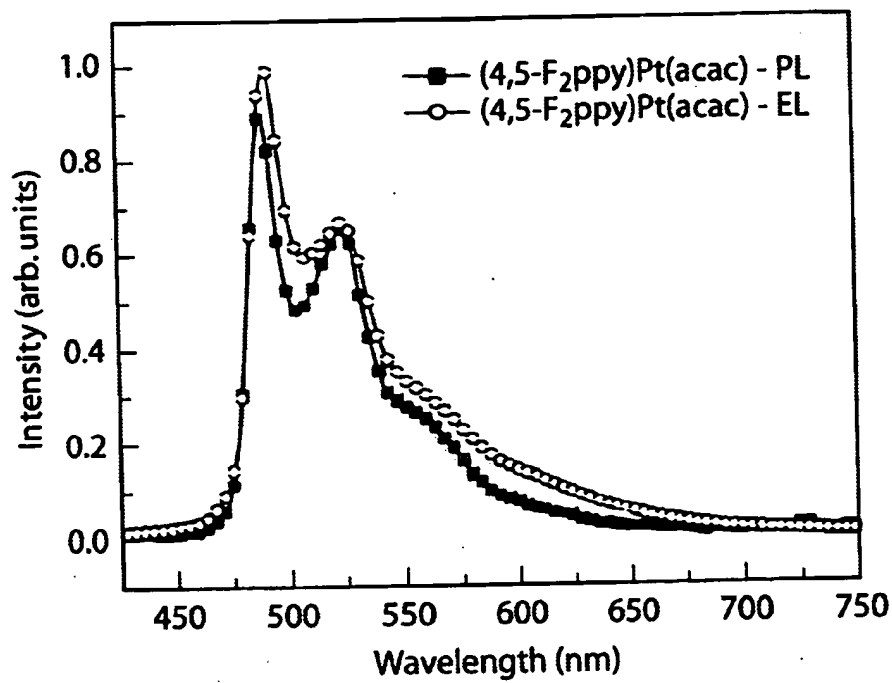
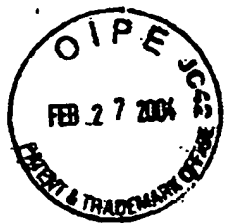
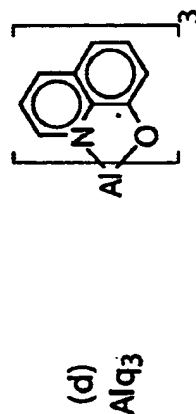
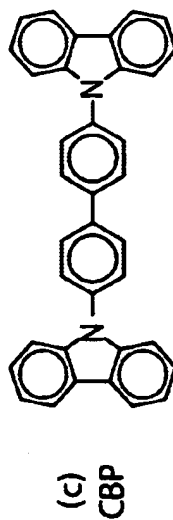
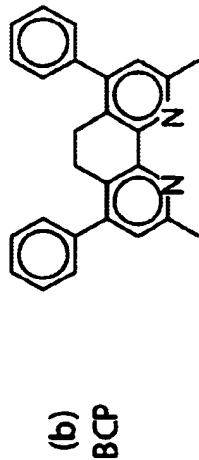
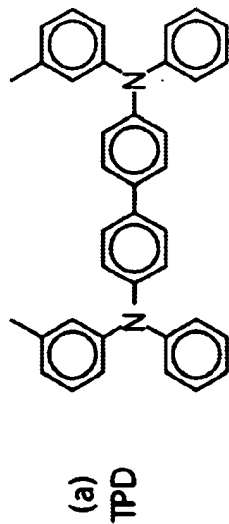


Fig. 16



PRB 62

HOSTS



GUESTS

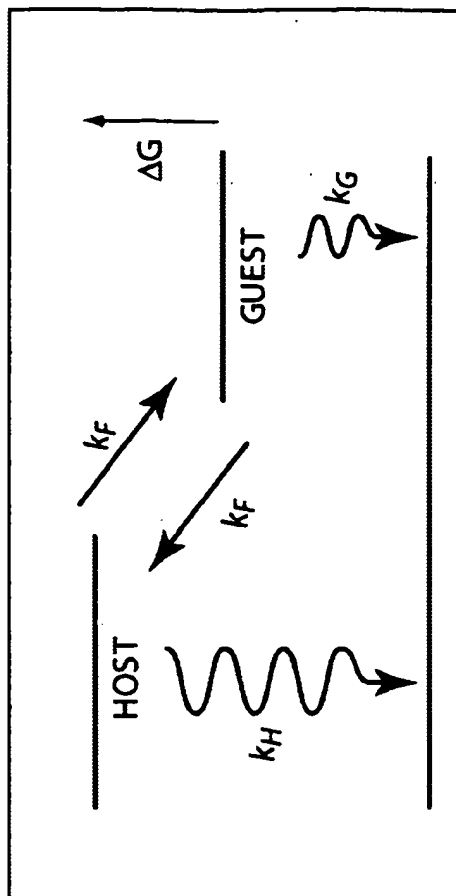
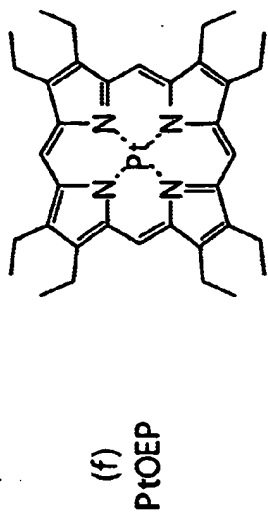
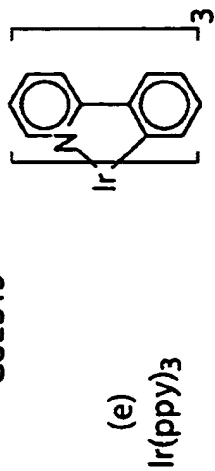


Fig.17



PRB 62

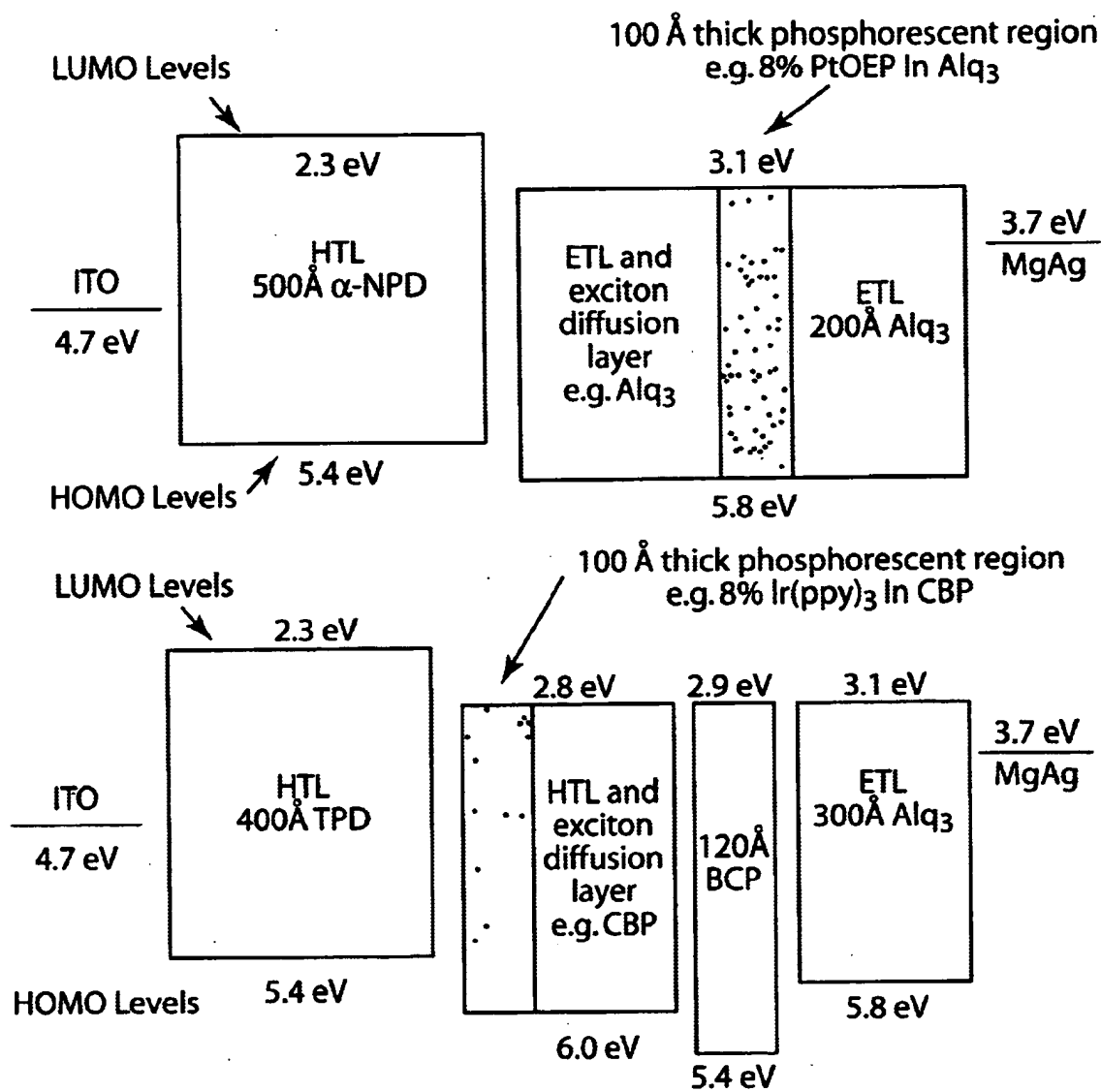


Fig. 18

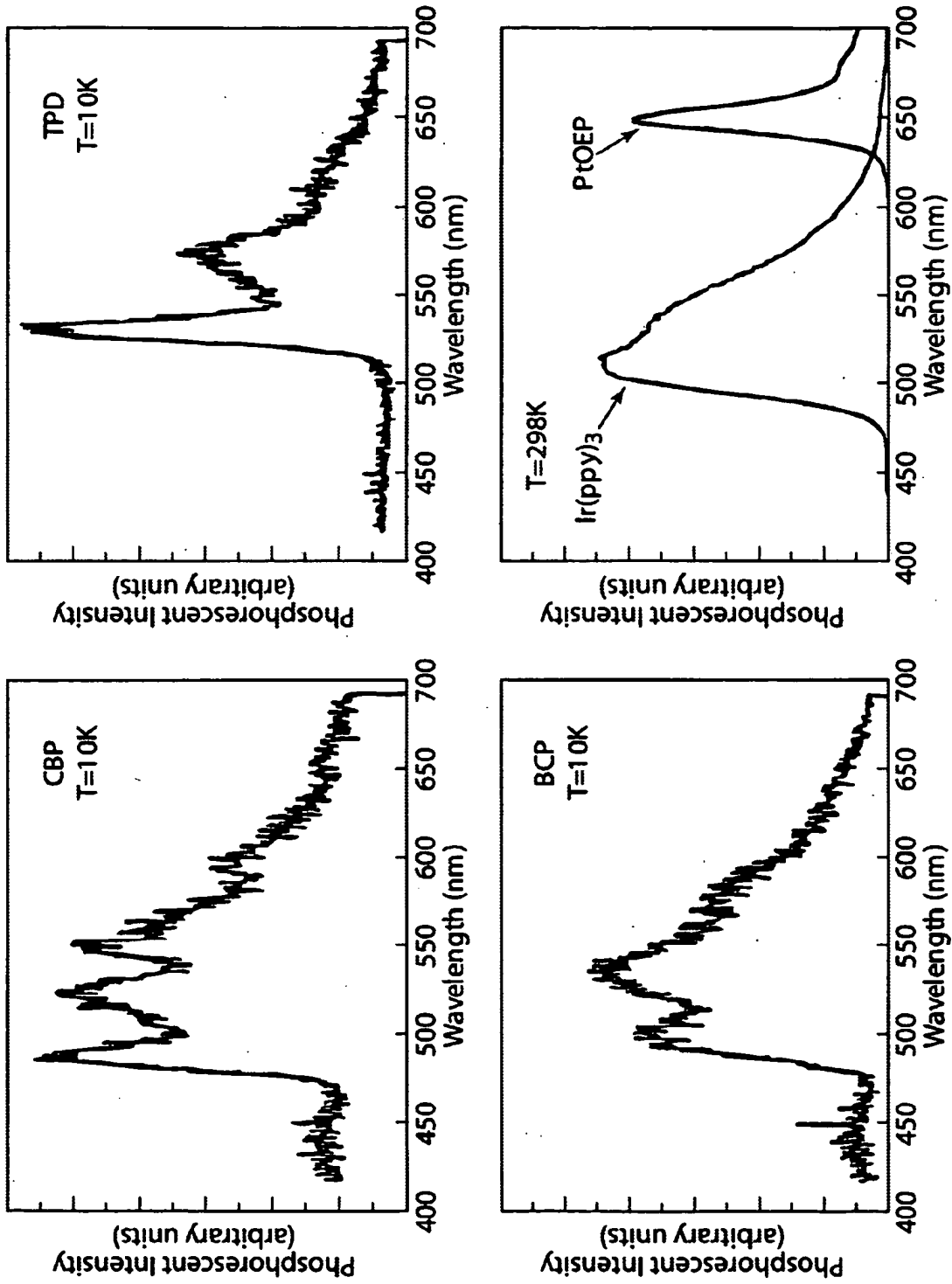


Fig.19

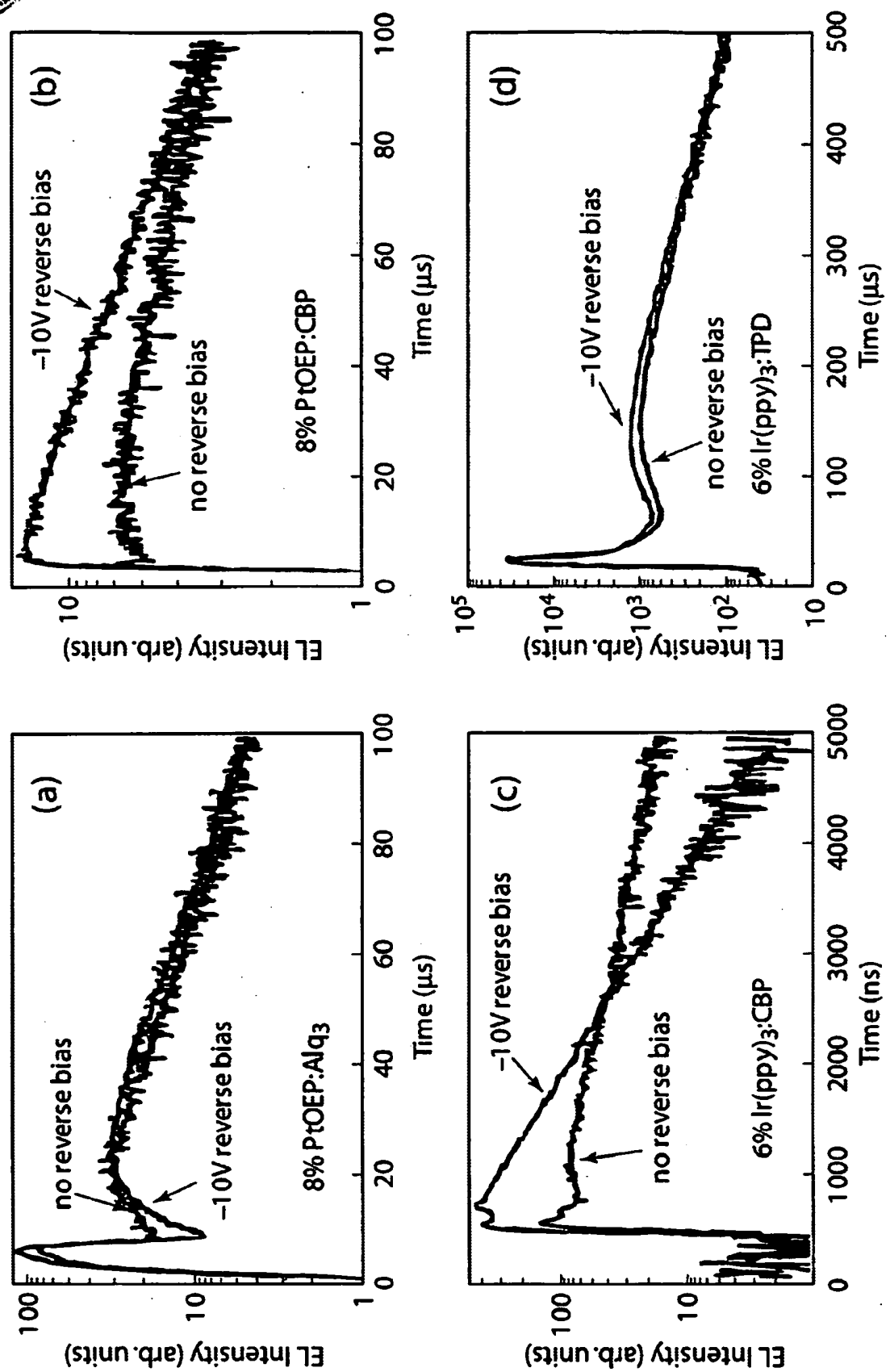


Fig.20



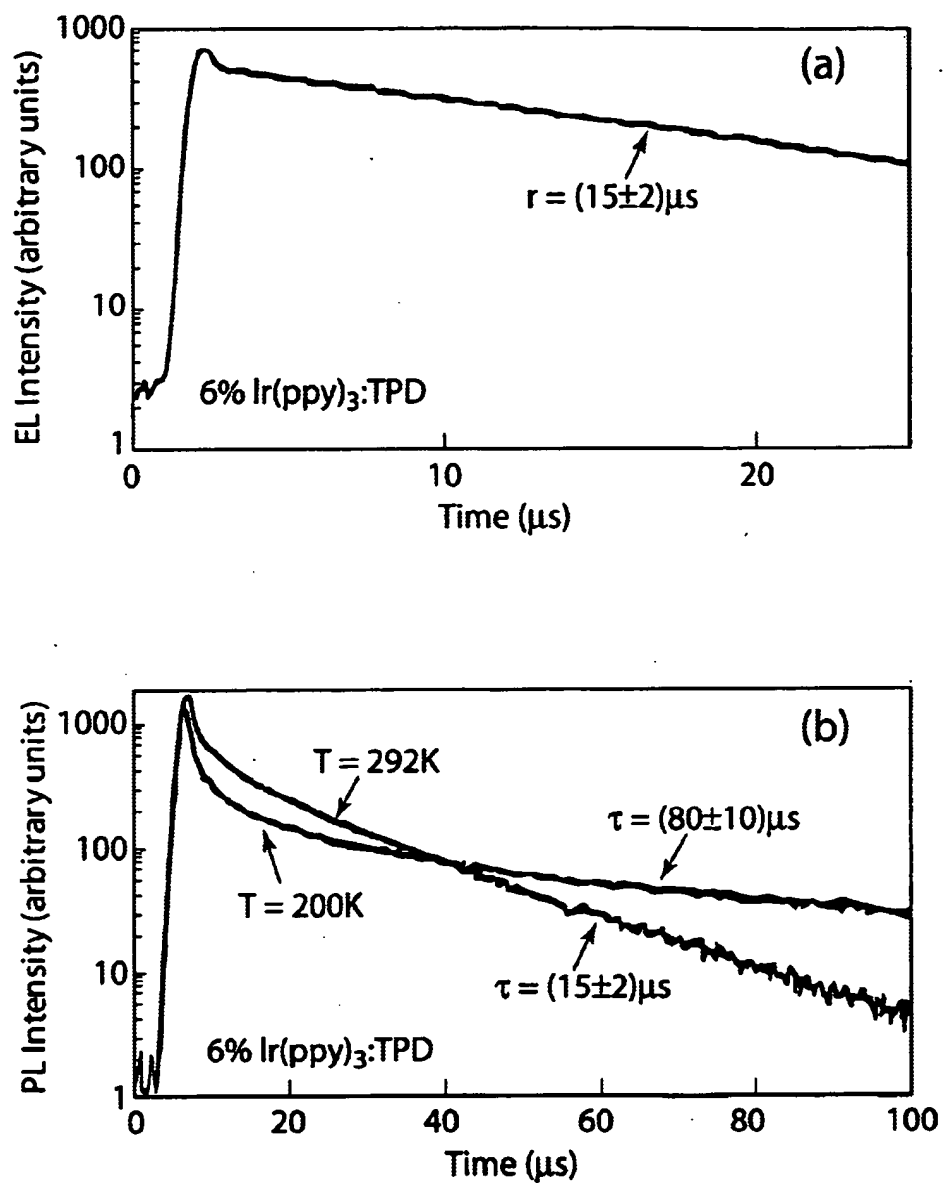


Fig. 21

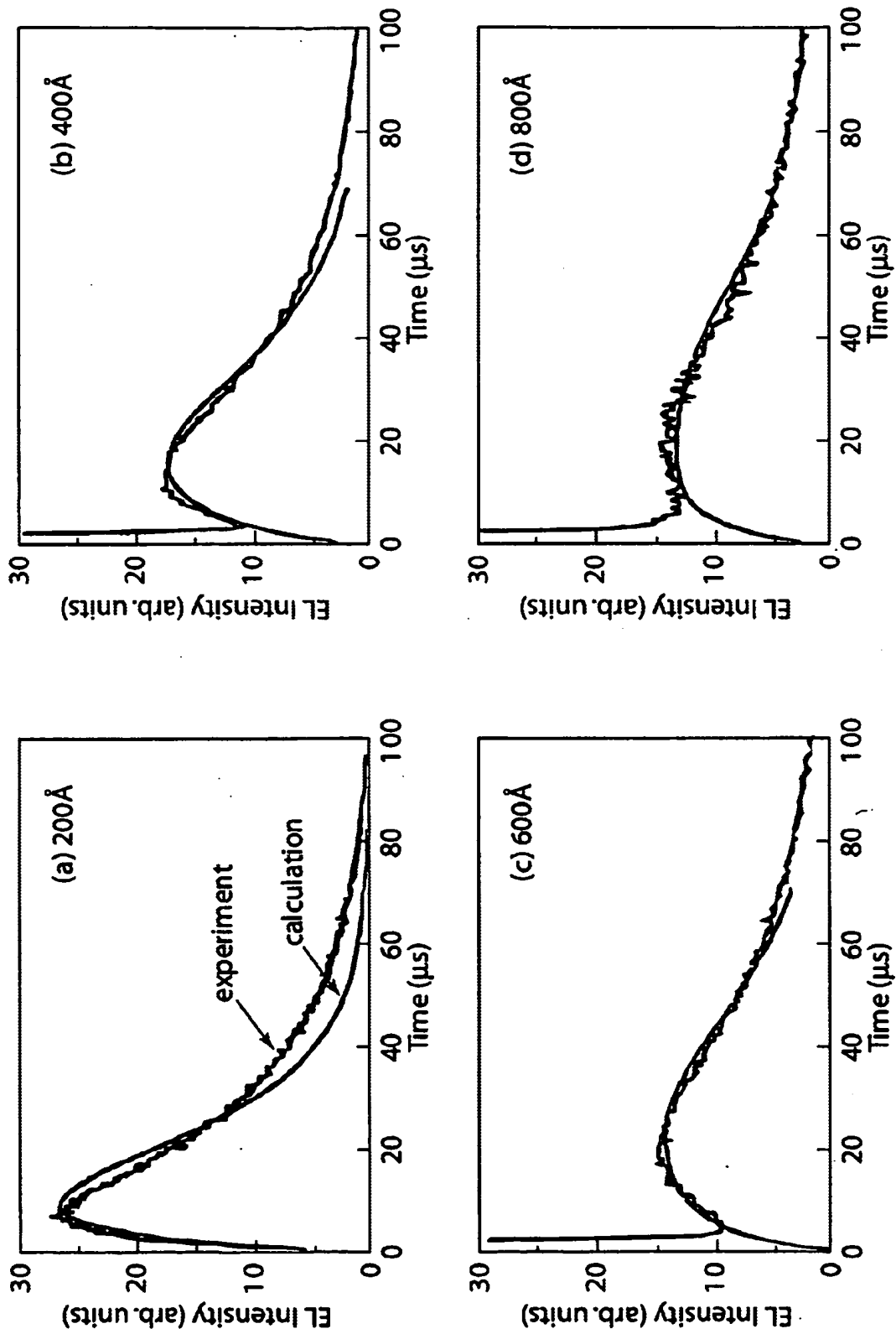


Fig. 22

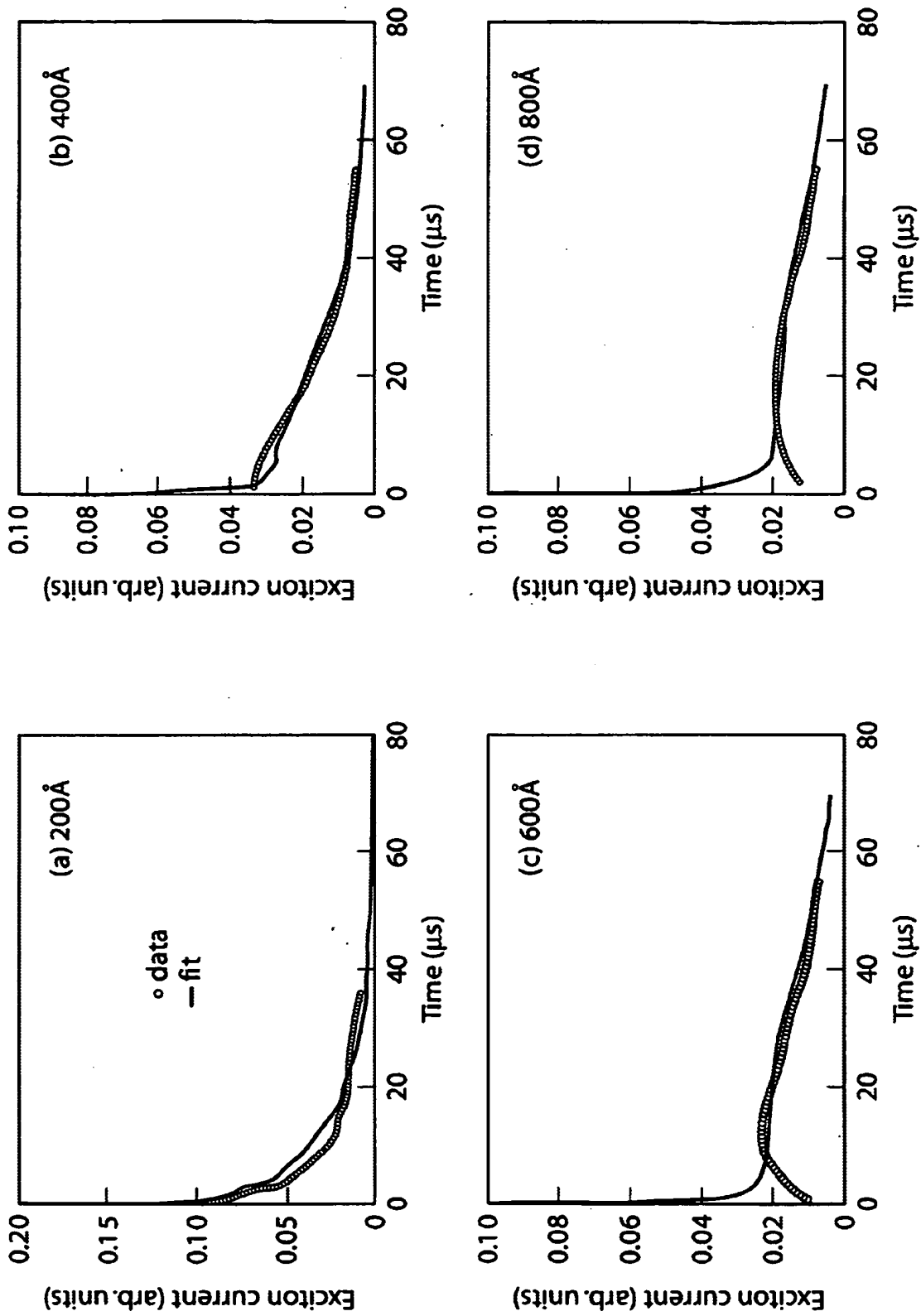


Fig. 23